STIC Search Report
EIC 1700

USPTO

STIC Database Tracking Number: 178832

TO: Ardith Hertzog **Location: REM 9A20** **Art Unit : 1754** **February 8, 2006** **Case Serial Number:** ~~**PCT/US04/05645**~~ 10/786,671	**From: Les Henderson** **Location: EIC 1700** **REM 4B28 / 4A30** **Phone: 571-272-2538** **Leslie.henderson@uspto.gov**

Search Notes

Claim 4

sira
Search and Information Resources Administration

Access DB# 178832

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: ARDITH E. HERTZOG Examiner #: 71465 Date: 2.7.06
Art Unit: 1754 Phone Number ~~30~~ 2-1247 Serial Number: PCT-US04-05645
Mail Box and Bldg/Room Location: Rem 9A20 (Office) Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. (doesn't matter)

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Per attached BIB DATA SHEET =>

Inventors (please provide full names):

Earliest Priority Filing Date:

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for
the compositions
of
claim 4—

Thank you,
Ardith

SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr
FEB
Pat. & T.M. Office

****

STAFF USE ONLY

	Type of Search		Vendors and cost where applicable	
Searcher: KH	NA Sequence (#)		STN	$ 994.94
Searcher Phone #:	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	Bibliographic	✓	Dr.Link	
Date Completed: 2/8/06	Litigation		Lexis/Nexis	
Searcher Prep & Review Time: 30	Fulltext		Sequence Systems	
Clerical Prep Time: 30	Patent Family		WWW/Internet	
Online Time: 200	Other		Other (specify)	

TO-1590 (8-01)

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1. A composition, comprising:

a metal nitrate selected from d-block metal nitrates and f-block metal nitrates; and

a metal salt having weakly bound counter anions, wherein the metal of the metal salt having weakly bound counter anions is selected from a d-block metal and an f-block metal.

2. The composition of claim 1, wherein the metal nitrate is selected from iron (III) nitrate, cobalt (II) nitrate, nickel (II) nitrate, copper (II) nitrate, cerium (III) nitrate and cerium (IV) nitrate.

3. The composition of claim 1, wherein the metal salt having weakly bound counter anions is selected from copper (II) perchlorate, copper (II) trifluoromethanesulfonate, and copper (II) tetrafluoroborate.

4. The composition of claim 1, wherein the metal nitrate is selected from iron (III) nitrate, cobalt (II) nitrate, nickel (II) nitrate, copper (II) nitrate, cerium (III) nitrate and cerium (IV) nitrate, and wherein the metal salt having weakly bound counter anions is selected from copper (II) perchlorate, copper (II) trifluoromethanesulfonate, and copper (II) tetrafluoroborate.

5. The composition of claim 1, wherein the metal nitrate is copper nitrate and the metal salt having weakly bound counter anions is copper trifluoromethanesulfonate.

6. The composition of claim 1, further comprising a polyoxometalate.

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CONFIRMATION NO. 3022

Bib Data Sheet

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/786,671	02/25/2004 RULE	588	1754	50508-1190

APPLICANTS

Nelya Okun, Alpharetta, GA;

Craig L. Hill, Atlanta, GA;

(PCT is based on this US case)

* CONTINUING DATA **********

This appln claims benefit of 60/449,892 02/25/2003

* FOREIGN APPLICATIONS **********

** SMALL ENTITY **

Foreign Priority claimed ☐ yes ☐ no 35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance Verified and Acknowledged _____ Examiner's Signature _____ Initials	STATE OR COUNTRY GA	SHEETS DRAWING 0	TOTAL CLAIMS 58	INDEPENDENT CLAIMS 2

ADDRESS
24504
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA , GA
30339-5948

TITLE
Compositions, materials incorporating the compositions, and methods of using the compositions and materials

FILING FEE RECEIVED 792	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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     (FILE 'HOME' ENTERED AT 09:48:09 ON 08 FEB 2006)

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L1             1 SEA ABB=ON  PLU=ON  US20040230086/PN
                  D ALL
                  SEL RN

     FILE 'REGISTRY' ENTERED AT 09:50:45 ON 08 FEB 2006
L2            41 SEA ABB=ON  PLU=ON  (100-42-5/BI OR 10108-73-3/BI OR
                  10141-05-6/BI OR 10421-48-4/BI OR 107-92-6/BI OR
                  109-52-4/BI OR 110-81-6/BI OR 110-86-1/BI OR 13093-17-9
                  /BI OR 13138-45-9/BI OR 134360-58-0/BI OR 13770-18-8/BI
                   OR 3251-23-8/BI OR 34946-82-2/BI OR 352-93-2/BI OR
                  38465-60-0/BI OR 50-00-0/BI OR 503-74-2/BI OR 505-60-2/
                  BI OR 57-12-5/BI OR 59858-44-5/BI OR 624-92-0/BI OR
                  630-08-0/BI OR 693-07-2/BI OR 74-93-1/BI OR 7439-89-6/B
                  I OR 7440-22-4/BI OR 7440-33-7/BI OR 7440-38-2/BI OR
                  7440-45-1/BI OR 75-07-0/BI OR 75-18-3/BI OR 75-44-5/BI
                  OR 75-50-3/BI OR 7664-41-7/BI OR 7704-34-9/BI OR
                  7727-37-9/BI OR 7783-06-4/BI OR 79-09-4/BI OR 795308-36
                  -0/BI OR 796042-78-9/BI)
L3             6 SEA ABB=ON  PLU=ON  L2 AND HNO3
                  D SCAN
L4            13 SEA ABB=ON  PLU=ON  L2 AND 2/NC
                  D SCAN
L5            28 SEA ABB=ON  PLU=ON  L2 NOT L4
                  D SCAN
L6             7 SEA ABB=ON  PLU=ON  L4 NOT L3
                  D SCAN
L7       3069335 SEA ABB=ON  PLU=ON  (T1 OR T2 OR T3 OR LNTH OR ACTN OR
                  SHEL)/PG
L8        513926 SEA ABB=ON  PLU=ON  L7 AND 4/ELC.SUB
L9          3918 SEA ABB=ON  PLU=ON  L7 AND (H(L)N(L)O)/ELS(L)4/ELC.SUB
L10         1184 SEA ABB=ON  PLU=ON  L9 AND (HNO3 OR NO3)
L11         2734 SEA ABB=ON  PLU=ON  L9 NOT L10
L12           23 SEA ABB=ON  PLU=ON  L7 AND (CL(L)O)/ELS(L)3/ELC.SUB
                  AND CLO4
                  D SCAN L6
L13            3 SEA ABB=ON  PLU=ON  L6 AND 1/CU
                  D SCAN
L14        35316 SEA ABB=ON  PLU=ON  L7 AND (BF4 OR CHF3O3S)
L15         1447 SEA ABB=ON  PLU=ON  L14 NOT 1-50/NR
L16           32 SEA ABB=ON  PLU=ON  (L15 AND BF4) AND 3/ELC.SUB
L17            0 SEA ABB=ON  PLU=ON  (L15 AND CF3O3S) AND 6/ELC.SUB
L18         1158 SEA ABB=ON  PLU=ON  L7 AND (TRIFLATE OR TRIFLUOROMETHAN
                  ESULFONATE)
L19          138 SEA ABB=ON  PLU=ON  L18 NOT 1-100/NR
L20           77 SEA ABB=ON  PLU=ON  L19 AND (((C(L)H(L)F(L)O(L)S)/ELS(L
                  )6/ELC.SUB) OR ((C(L)F(L)O(L)S)/ELS(L)5/ELC.SUB))
L21            3 SEA ABB=ON  PLU=ON  L20 AND 1/NC
                  D SCAN
L22           60 SEA ABB=ON  PLU=ON  L20 AND 2/NC
                  D SCAN L21
L23           14 SEA ABB=ON  PLU=ON  L20 NOT (L21 OR L22)
                  D SCAN
L24           13 SEA ABB=ON  PLU=ON  L23 NOT C6H9AG
L25           73 SEA ABB=ON  PLU=ON  L24 OR L22

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L26        16041 SEA ABB=ON  PLU=ON  L3
L27         2027 SEA ABB=ON  PLU=ON  L13
L28          181 SEA ABB=ON  PLU=ON  L26 AND L27
L29              QUE ABB=ON  PLU=ON  COMPOSIT? OR COMPN# OR COMPSN#
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L30          20 SEA ABB=ON  PLU=ON  L28(L)L29
L31           0 SEA ABB=ON  PLU=ON  (L26(L)L27)(L)L29
L32           2 SEA ABB=ON  PLU=ON  (L26(L)L27)
                D SCAN
L33           1 SEA ABB=ON  PLU=ON  L26(4A)L27
                D SCAN
L34          20 SEA ABB=ON  PLU=ON  L28 AND L29
                D SCAN
L35             QUE ABB=ON  PLU=ON  (MIXT# OR MIXTURE? OR BLEND? OR
                ADMIX? OR COMMIX? OR IMMIX? OR INTERMIX? OR COMPOSIT?
                OR COMPN# OR COMPSN# OR FORMULAT? OR INTERSPER?)/TI
L36          13 SEA ABB=ON  PLU=ON  L28 AND L35
                D SCAN TI
L37           1 SEA ABB=ON  PLU=ON  L1 AND L36
                D SCAN
L38      429744 SEA ABB=ON  PLU=ON  AIR POLLUTION/SC,SX
L39           1 SEA ABB=ON  PLU=ON  L38 AND L34
L40           1 SEA ABB=ON  PLU=ON  L28 AND L39
                D SCAN
L41      526458 SEA ABB=ON  PLU=ON  TOX?/SC,SX
L42           2 SEA ABB=ON  PLU=ON  L28 AND L41
                D SCAN
L43     1252802 SEA ABB=ON  PLU=ON  PHARMACOL?/SC,SX
L44           4 SEA ABB=ON  PLU=ON  L28 AND L43
                D SCAN
L45       26254 SEA ABB=ON  PLU=ON  WEAK?(2A)(BOND? OR BOUND? OR
                BIND?)
L46           2 SEA ABB=ON  PLU=ON  L45 AND L28
                D SCAN
L47        3664 SEA ABB=ON  PLU=ON  WEAK?(2A)ANION?
L48           2 SEA ABB=ON  PLU=ON  L47 AND L28
                D SCAN TI
L49             QUE ABB=ON  PLU=ON  CONTAMIN? OR POLLUT? OR TOX? OR
                POISON?
L50           6 SEA ABB=ON  PLU=ON  L49 AND L28
                D SCAN
L51             QUE ABB=ON  PLU=ON  PURE OR PURIF? OR CLEAN? OR
                DECONTAM?
L52           5 SEA ABB=ON  PLU=ON  L28 AND L51
                D SCAN TI
L53             QUE ABB=ON  PLU=ON  MIX? OR MIXT# OR MIXTURE? OR
                BLEND? OR ADMIX? OR COMMIX?
L54             QUE ABB=ON  PLU=ON  IMMIX? OR INTERMIX? OR DOPE# OR
                DOPING# OR DOPANT# OR IMPREGNAT? OR COMPOSIT? OR
                COMPN#
L55             QUE ABB=ON  PLU=ON  COMPSN# OR FORMULAT? OR COMBINAT?
                OR INTERSPER? OR AMALGAM?
L56          64 SEA ABB=ON  PLU=ON  L28 AND ((L53 OR L54 OR L55))
                D SCAN TI
L57          43 SEA ABB=ON  PLU=ON  L56 NOT (L30 OR L36)
                D SCAN TI
L58           1 SEA ABB=ON  PLU=ON  L57 AND (L38 OR L41 OR L43)
                D SCAN
L59          64 SEA ABB=ON  PLU=ON  L56 OR L30 OR L36
L60             QUE ABB=ON  PLU=ON  WAR? OR EXPLO?
L61           4 SEA ABB=ON  PLU=ON  L59 AND L60
L62       59360 SEA ABB=ON  PLU=ON  L9
L63         249 SEA ABB=ON  PLU=ON  L12
L64        1626 SEA ABB=ON  PLU=ON  L16
L65        4018 SEA ABB=ON  PLU=ON  L25
L66         351 SEA ABB=ON  PLU=ON  L62 AND (L63 OR L64 OR L65)
L67         281 SEA ABB=ON  PLU=ON  L66 NOT L28
L68          31 SEA ABB=ON  PLU=ON  L67 AND L29
L69           1 SEA ABB=ON  PLU=ON  L68 AND (L38 OR L41 OR L43 OR L45
                OR L47 OR L49 OR L51 OR L60)
                D SCAN
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                D KWIC
L70          110 SEA ABB=ON  PLU=ON  L67 AND (L53 OR L54 OR L55)
L71           12 SEA ABB=ON  PLU=ON  L70 AND (L38 OR L41 OR L43 OR L45
                 OR L47 OR L49 OR L51 OR L60)
                D SCAN TI
L72           42 SEA ABB=ON  PLU=ON  L68 OR L71
L73           35 SEA ABB=ON  PLU=ON  OKUN N?/AU
L74         2316 SEA ABB=ON  PLU=ON  HILL C?/AU
L75           10 SEA ABB=ON  PLU=ON  L74 AND L73
                D SCAN TI
L76            3 SEA ABB=ON  PLU=ON  L75 AND L28
                D SCAN
L77           24 SEA ABB=ON  PLU=ON  L36 OR L39 OR L40 OR L42 OR L44 OR
                 L46 OR L48 OR L50 OR L52 OR L58 OR L61
L78           30 SEA ABB=ON  PLU=ON  L77 OR L30 OR L34
L79           25 SEA ABB=ON  PLU=ON  L78 NOT (L58 OR L61)
L80            5 SEA ABB=ON  PLU=ON  L78 NOT L79
                D SCAN
L81           42 SEA ABB=ON  PLU=ON  L72 NOT L78
L82           12 SEA ABB=ON  PLU=ON  L69 OR L71
L83           30 SEA ABB=ON  PLU=ON  L72 NOT L82
L84           43 SEA ABB=ON  PLU=ON  L78 OR L82 OR L76
L85           30 SEA ABB=ON  PLU=ON  L72 NOT L84
                D SCAN TI
L86            2 SEA ABB=ON  PLU=ON  L85 AND (BLEACH? OR PRESERV?)
                D SCAN
L87           28 SEA ABB=ON  PLU=ON  L85 NOT L86
L88           45 SEA ABB=ON  PLU=ON  L84 OR L86


=> => d l88 1-45 ibib abs hitstr hitind

L88  ANSWER 1 OF 45  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2005:1307651  HCAPLUS
DOCUMENT NUMBER:         144:53781
TITLE:                   Liquid media containing Lewis acidic reactive
                         compounds for storage and delivery of Lewis
                         basic gases
INVENTOR(S):             Tempel, Daniel Joseph; Henderson, Philip
                         Bruce; Brzozowski, Jeffrey Richard;
                         Pearlstein, Ronald Martin; Gaffney, Thomas
                         Richard
PATENT ASSIGNEE(S):      USA
SOURCE:                  U.S. Pat. Appl. Publ., 11 pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

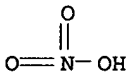
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    --------------------
     --------
     US 2005276733        A1    20051215    US 2004-867068
                                                                   2004
                                                                   0614
     EP 1607674           A1    20051221    EP 2005-12660
                                                                   2005
                                                                   0613
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
             MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
             EE, HU, PL, SK, BA, HR, IS, YU
     JP 2006002939        A2    20060105    JP 2005-173618
                                                                   2005
                                                                   0614
PRIORITY APPLN. INFO.:                      US 2004-867068      A
```

2004
0614

AB In the low-pressure storage and delivery system for gases having Lewis basicity, particularly hazardous specialty gases such as phosphine and arsine, which are utilized in the electronics industry, the gases are stored in a liquid incorporating a reactive compound having Lewis acidity capable of effecting a reversible reaction between itself and the gas having Lewis basicity. The reactive compound comprises a reactive species that is dissolved, suspended, dispersed, or otherwise **mixed** with a nonvolatile liquid

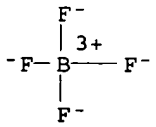
IT **7761-88-8**, Silver nitrate (AgNO3), uses **14104-20-2** , Silver fluoroborate (AgBF4) **38465-60-0** **54761-04-5**
RL: NUU (Other use, unclassified); USES (Uses)
(liquid media containing Lewis acidic reactive compds. for storage and delivery of Lewis basic gases)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



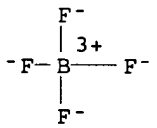
● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



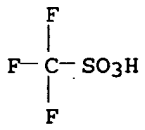
● Ag(I) +

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

RN 54761-04-5 HCAPLUS
CN Methanesulfonic acid, trifluoro-, ytterbium(3+) salt (9CI) (CA INDEX NAME)



●1/3 Yb(III)

IC ICM B01J008-02
INCL 422211000
CC 48-4 (Unit Operations and Processes)
Section cross-reference(s): **59**, 76
IT 65-85-0, Benzoic acid, uses 75-46-7D, Carbon trifluoride, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 75-93-4D, Methyl sulfate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 75-98-9 104-15-4, p-Toluenesulfonic acid, uses 122-56-5, Tributylborane 142-71-2, Copper acetate 540-82-9D, Ethyl sulfate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 544-92-3, Copper cyanide (Cu(CN)) 688-74-4, Tributyl borate 1109-15-5, Tris(perfluorophenyl)borane 1273-81-0, Osmocene 1287-13-4, Ruthenocene 1510-16-3, Dodecylsulfonic acid 2035-66-7, Palladium cyanide (Pd(CN)2) 2966-50-9 3112-67-2 4403-68-3 4767-03-7, Dimethylolpropionic acid 5138-18-1D, Sulfosuccinic acid, dialkyl derivs. 7439-95-4D, Magnesium, complexes with bisoxazoline 7440-05-3D, Palladium, complexes with bisoxazoline 7440-50-8D, Copper, complexes with bisoxazoline 7440-66-6D, Zinc, complexes with bisoxazoline 7446-70-0, Aluminum chloride (AlCl3), uses 7447-39-4, Cupric chloride, uses 7550-45-0, Titanium chloride (TiCl4), uses 7646-78-8, Tin chloride (SnCl4), uses 7646-85-7, Zinc chloride (ZnCl2), uses 7647-10-1, Palladium chloride (PdCl2) 7647-18-9, Antimony chloride (SbCl5) 7681-65-4, Copper iodide (CuI) 7705-08-0, Ferric chloride, uses 7718-54-9, Nickel chloride (NiCl2), uses 7758-89-6, Copper chloride (CuCl) **7761-88-8**, Silver nitrate (AgNO3), uses 7772-99-8, Tin chloride (SnCl2), uses 7773-01-5, Manganese chloride (MnCl2) 7783-90-6, Silver chloride (AgCl), uses 7783-96-2, Silver iodide 7785-23-1, Silver bromide (AgBr) 7786-30-3, Magnesium chloride (MgCl2), uses 7787-70-4, Copper monobromide 9003-70-7D, Polystyrene-divinylbenzene copolymer, sulfonated 10025-82-8, Indium chloride (InCl3) 10025-91-9, Antimony chloride (SbCl3) 10026-11-6, Zirconium chloride (ZrCl4) 10026-12-7, Niobium chloride (NbCl5) 10043-52-4, Calcium chloride (CaCl2), uses 13450-90-3, Gallium chloride (GaCl3) 13454-96-1, Platinum chloride (PtCl4) **14104-20-2**, Silver fluoroborate (AgBF4) 14220-26-9 14798-03-9D, Ammonium, tetraalkyl derivs. 14874-70-5D, Tetrafluoroborate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 15388-37-1 16712-25-7, Copper trifluoroacetate 16722-51-3D, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts, uses 16749-13-6D, Phosphonium, tetraalkyl derivs. 16919-18-9D, Hexafluorophosphate, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 16969-45-2D, Pyridinium, N-alkyl 17009-90-4D, Imidazolium, N,N'-dialkyl 17009-91-5, Pyrazolium 17009-93-7, Pyrazinium 17009-95-9, Pyrimidinium 17009-97-1, Pyridazinium 21228-90-0D, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium salts 25322-68-3, Poly(ethylene oxide) 25535-55-1 27176-87-0, Dodecylbenzenesulfonic acid 28589-79-9, Thiazolium 36554-89-9 37181-39-8D, Triflate, N-alkylpyridinium,

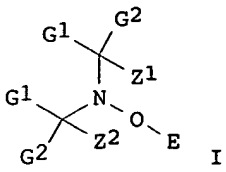
tetraalkylammonium, or tetraalkylphosphonium salts
38465-60-0 48028-76-8D, N-alkylpyridinium,
tetraalkylammonium, or tetraalkylphosphonium salts
54761-04-5 56743-27-2, Dimethylolbutanoic acid
57048-33-6, Copper hexafluoroarsenate 57811-65-1 60821-13-8
60884-90-4 61674-41-7D, Boron fluoride (BF4-),
N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium
salts 64001-57-6, Oxazolium 65039-03-4, 1-Ethyl-3-
methylimidazolium 70236-92-9 80432-08-2, 1-Butyl-3-
methylimidazolium 82113-65-3D, Bis(trifluoromethylsulfonyl)imide
, N-alkylpyridinium, tetraalkylammonium, or tetraalkylphosphonium
salts 98837-98-0D, N-alkylpyridinium, tetraalkylammonium, or
tetraalkylphosphonium salts 117288-37-6 188261-99-6
220035-23-4 220835-52-9, Platinum iodide 291300-50-0
871465-85-9 871465-86-0 871466-50-1 871466-51-2
RL: NUU (Other use, unclassified); USES (Uses)
(liquid media containing Lewis acidic reactive compds. for storage
and delivery of Lewis basic gases)

L88 ANSWER 2 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:55203 HCAPLUS
DOCUMENT NUMBER: 142:155822
TITLE: Hydrogen peroxide catalyzed alkoxylation of nitroxyl compounds to sterically hindered N-hydrocarbyloxyamines, especially N-hydrocarbyloxy-2,2,6,6-piperidines
INVENTOR(S): Galbo, James Peter; Detlefsen, Robert Edward
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

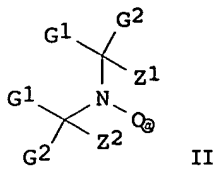
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005005388	A1	20050120	WO 2004-EP51352	2004 0705
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005014948	A1	20050120	US 2004-889339	2004 0712

PRIORITY APPLN. INFO.: US 2003-486994P P 2003 0714

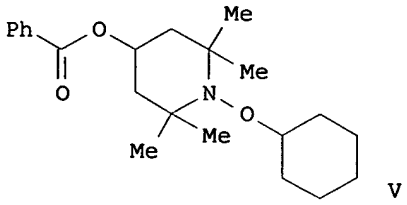
OTHER SOURCE(S): CASREACT 142:155822; MARPAT 142:155822
GI



I



II



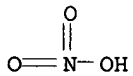
V

AB The invention is directed to the preparation of sterically hindered N-hydrocarbyloxyamines I, well-known as thermal and light stabilizers, by alkoxylation of hindered amine N-oxyl compds. II with a hydrocarbon solvent containing no activated hydrogen atoms in the presence of hydrogen peroxide or a hydrogen peroxide equivalent, a catalytic amount of a peroxide decomposing transition metal salt, metal oxide, or metal-ligand complex, an inert cosolvent and an optionally acid [wherein G1, G2 = independently alkyl or are together pentamethylene; Z1, Z2 = each Me, or Z1 and Z2 together form a (un)substituted linking moiety; E = alkyl, cycloalkyl, bicycloalkyl, etc; with the provision that in the hydrocarbon, no carbon atom attached to an aromatic ring is substituted by H]. The advantages include use of less **toxic** solvents, cheap oxidation reagents, absence of additives, and lower reaction temperature Thus, dropwise addition at reflux over 4.75 h of 50% aqueous H2O2 to a preheated mixture containing FeSO4•7H2O (III), CH3SO3H (IV), 1-oxyl-4-benzoyloxy-2,2,6,6-tetramethylpiperidine, acetonitrile and hexane, with addnl. portions of III and IV added after 1 and 2.25 h after the peroxide addition started, gave 65% V.

IT **10421-48-4**, Iron(III) nitrate **34946-82-2**, Copper(II) trifluoromethanesulfonate
RL: CAT (Catalyst use); USES (Uses)
(preparation of sterically hindered N-hydrocarbyloxyamines, in particular N-hydrocarbyloxy-2,2,6,6-piperidines, by hydrogen peroxide catalyzed alkoxylation of N-oxyl compds.)

RN 10421-48-4 HCAPLUS

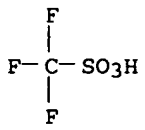
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 34946-82-2 HCAPLUS

CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C07D211-94
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 45
IT 124-43-6, Urea hydrogen peroxide 516-03-0, Iron(II) oxalate 818-08-6, Dibutyltin oxide 992-92-7, Titanium tetramethoxide 1282-37-7, Ferrocenium tetrafluoroborate 1309-37-1, Iron(III) oxide, uses 1317-38-0, Copper(II) oxide, uses 1317-39-1, Copper(I) oxide, uses 1317-61-9, Iron oxide (Fe3O4), uses 1345-25-1, Iron(II) oxide, uses 2944-66-3 3094-87-9, Iron(II) acetate 3522-50-7, Iron(III) citrate 5593-70-4, Titanium tetrabutoxide 5781-22-6, Iron(II) trifluoroacetate 7439-89-6, Iron, uses 7440-50-8, Copper, uses 7447-39-4, Copper(II) chloride, uses 7646-78-8, Tin tetrachloride, uses 7646-79-9, Cobalt(II) chloride, uses 7705-07-9, Titanium(III) chloride, uses 7705-08-0, Iron(III) chloride, uses 7718-98-1, Vanadium trichloride 7722-84-1, Hydrogen peroxide, uses 7758-89-6, Copper(I) chloride 7758-94-3, Iron(II) chloride 7758-98-7, Copper(II) sulfate, uses 7773-01-5, Manganese dichloride 7790-86-5, Cerium trichloride 10028-22-5, Iron(III) sulfate **10421-48-4**, Iron(III) nitrate 10580-52-6, Vanadium dichloride 11077-24-0, Ferrocenium hexafluorophosphate 13537-24-1, Iron(III) perchlorate 13933-23-8, Iron(II) perchlorate 14024-17-0, Iron(II) acetylacetonate 15283-51-9, Iron(II) tetrafluoroborate 16712-25-7, Copper(II) trifluoroacetate 23383-11-1, Ferrous citrate **34946-82-2**, Copper(II) trifluoromethanesulfonate 60344-03-8, Ferrous pivalate 77214-82-5, Iron(III) p-toluenesulfonate 125689-93-2 138124-32-0 176763-62-5
RL: CAT (Catalyst use); USES (Uses)
(preparation of sterically hindered N-hydrocarbyloxyamines, in particular N-hydrocarbyloxy-2,2,6,6-piperidines, by hydrogen peroxide catalyzed alkoxylation of N-oxyl compds.)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 3 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:999712 HCAPLUS
DOCUMENT NUMBER: 141:427184
TITLE: **Compositions**, materials incorporating the **compositions**, and methods of using the **compositions** and materials
INVENTOR(S): **Okun, Nelya; Hill, Craig L.**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

this case

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2004230086	A1	20041118	US 2004-786671	2004 0225
WO 2005021435	A2	20050310	WO 2004-US5645	2004 0225

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

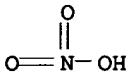
PRIORITY APPLN. INFO.:	US 2003-449892P	P	2003 0225
	US 2004-786671	A	2004 0225

AB **Compns.** that can protect and/or remove **contaminants** such as **warfare** agents from the environment in which people are operating are disclosed, as are materials incorporating the **compns.**, and methods of use thereof. In one embodiment, the **composition** includes a metal nitrate selected from d-block metal nitrates and f-block metal nitrates and a metal salt having **weakly bound** counter **anions.** The metal of the metal salt having **weakly bound** counter **anions** is selected from a d-block metal and an f-block metal. Another embodiment of the **composition** includes a first polyoxometalate having a first metal selected from a d-block metal and an f-block metal and a second polyoxometalate having a second metal selected from a d-block metal and an f-block metal, the first metal being an open coordinate site of the first polyoxometalate. In addition, the first metal has a nitrate terminal ligand.

IT **3251-23-8**, Copper (II) nitrate **10108-73-3**, Cerium (III) nitrate **10141-05-6**, Cobalt (II) nitrate **10421-48-4**, Iron (III) nitrate **13093-17-9** **13138-45-9**, Nickel (II) nitrate **13770-18-8**, Copper (II) perchlorate **34946-82-2**, Copper (II) trifluoromethanesulfonate **38465-60-0**, Copper (II) tetrafluoroborate
RL: CAT (Catalyst use); USES (Uses)
(catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

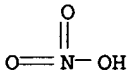
RN 3251-23-8 HCAPLUS

CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



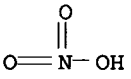
●1/2 Cu(II)

RN 10108-73-3 HCAPLUS
CN Nitric acid, cerium(3+) salt (8CI, 9CI) (CA INDEX NAME)



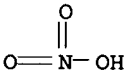
●1/3 Ce(III)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



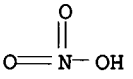
●1/2 Co(II)

RN 10421-48-4 HCAPLUS
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



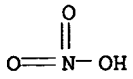
●1/3 Fe(III)

RN 13093-17-9 HCAPLUS
CN Nitric acid, cerium(4+) salt (8CI, 9CI) (CA INDEX NAME)



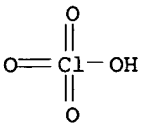
●1/4 Ce(IV)

RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



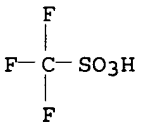
●1/2 Ni(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



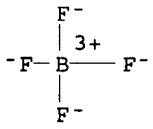
●1/2 Cu(II)

RN 34946-82-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

IC ICM A62D003-00
ICS C11D001-00
INCL 588205000
CC 59-2 (**Air Pollution** and Industrial Hygiene)
Section cross-reference(s): **4**
ST polyoxymetalate nitrate copper catalytic oxidn **warfare** agent
IT Biological **warfare** agents
Chemical **warfare** agents
Coating materials

Environmental **pollution** control
Oxidation catalysts
Powders
Textiles
(catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT Aldehydes, processes
RL: ADV (Adverse effect, including toxicity); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT Oxidation
(catalytic; catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT Drug delivery systems
(topical; catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT Heteropoly acids
RL: CAT (Catalyst use); USES (Uses)
(tungstates, complexes with iron, silver, and/or cerium; catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT 7727-37-9D, Nitrogen, compds.
RL: ADV (Adverse effect, including toxicity); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(aliphatic; catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

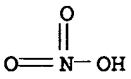
IT 7440-33-7D, Tungsten, heteropoly compds. containing, complexes with iron 59858-44-5 134360-58-0 795308-36-0 796042-78-9
RL: CAT (Catalyst use); USES (Uses)
(as polyoxometalate; catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT 50-00-0, Formaldehyde, processes 57-12-5D, Cyanide, compds. 74-93-1, Methyl mercaptan, processes 75-07-0, Acetaldehyde, processes 75-18-3, Dimethyl sulfide 75-44-5, Phosgene 75-50-3, Trimethylamine, processes 79-09-4, Propionic acid, processes 100-42-5, Styrene, processes 107-92-6, Butyric acid, processes 109-52-4, Valeric acid, processes 110-81-6, Diethyl disulfide 110-86-1, Pyridine, processes 352-93-2, Diethyl sulfide 503-74-2, Iso-valeric acid 505-60-2, Mustard gas 624-92-0 630-08-0, Carbon monoxide, processes 693-07-2, 2-Chloroethyl ethyl sulfide 7440-38-2D, Arsenic, compds. 7664-41-7, Ammonia, processes 7704-34-9D, Sulfur, compds. 7783-06-4, Hydrogen sulfide, processes
RL: ADV (Adverse effect, including toxicity); CPS (Chemical process); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

IT **3251-23-8**, Copper (II) nitrate 7439-89-6D, Iron, complexes with heteropolytungstates 7440-22-4D, Silver, complexes with heteropolytungstates 7440-45-1D, Cerium, complexes with heteropolytungstates **10108-73-3**, Cerium

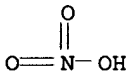
(III) nitrate **10141-05-6**, Cobalt (II) nitrate **10421-48-4**, Iron (III) nitrate **13093-17-9** **13138-45-9**, Nickel (II) nitrate **13770-18-8**, Copper (II) perchlorate **34946-82-2**, Copper (II) trifluoromethanesulfonate **38465-60-0**, Copper (II) tetrafluoroborate
RL: CAT (Catalyst use); USES (Uses)
(catalytic **compns.** for removal of **contaminants** such as **warfare** agents, and materials incorporating these **compns.**)

L88 ANSWER 4 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:783717 HCAPLUS
DOCUMENT NUMBER: 142:12991
TITLE: Tuning the Emission Color of Europium-Containing Ionic Liquid-Crystalline Phases
AUTHOR(S): Guillet, Erwann; Imbert, Daniel; Scopelliti, Rosario; Buenzli, Jean-Claude G.
CORPORATE SOURCE: Laboratory of Lanthanide Supramolecular Chemistry, Swiss Federal Institute of Technology, Lausanne, CH-1005, Switz.
SOURCE: Chemistry of Materials (2004), 16(21), 4063-4070
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Luminescent liquid-crystalline phases are produced by introducing trivalent Eu salts, EuY3 (Y = Cl, NO3, ClO4, CF3SO3), in room-temperature ionic liqs. (RTIL) derived from 1-alkyl-3-methylimidazolium, [Cn-mim]X (X = Cl, NO3; n = 12-18). Four new ionic liqs. are synthesized (X = NO3-, n = 12, 14, 16, 18) and characterized, and the structure of [C12-mim]Cl is elucidated by x-ray diffraction. DSC and polarized light microscopy demonstrate that the liquid-crystalline properties of Eu-containing [C12-mim]Cl are not much affected up to a salt concentration of 10 mol %, except for the mesogenic window which is enlarged. The RTIL displays a blue fluorescence and its intensity decreases substantially upon the introduction of EuIII salts, pointing to energy transfer from the RTIL to the metal ion. A high-resolution luminescence study conducted both at room and low (10 K) temperature unambiguously demonstrates that the 5 mol % solns. contain a single solvated EuIII species; when the counterion is Cl-, ClO4-, or CF3SO3-, it appears to be a polychloro complex with a low symmetry derived from an idealized cubic symmetry. In the case of nitrate, a stronger anion-EuIII interaction results in an emission spectrum in which the hypersensitive metal-centered red transition (5D0 → 7F2) predominates. As a matter of fact, the emission color of the liquid-crystalline phases can be easily turned from blue to red, depending on the excitation wavelength and the counterion Y, as demonstrated by the trichromatic coordinates of these materials.
IT **7761-88-8**, Silver nitrate, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tuning the emission color of europium-containing 1-alkyl-3-methylimidazolium nitrate ionic liquid-crystalline phases prepared using)
RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



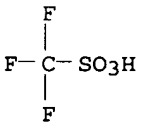
● Ag(I)

IT **10138-01-9**, Europium nitrate (Eu(NO3)3) **52093-25-1**
, Europium trifluoromethanesulfonate
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(tuning the emission color of europium-containing ionic liquid-crystalline phases)
RN 10138-01-9 HCAPLUS
CN Nitric acid, europium(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Eu(III)

RN 52093-25-1 HCAPLUS
CN Methanesulfonic acid, trifluoro-, europium(3+) salt (9CI) (CA INDEX NAME)



●1/3 Eu(III)

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 69, 75, 77
ST europium **dopant** imidazolium deriv salt fluorescence tuning; thermooptical fluorescence europium **dopant** imidazolium deriv salt; energy transfer europium **dopant** imidazolium deriv salt fluorescence tuning; NMR spectra europium **dopant** imidazolium dodecyl methylimidazolium chloride; IR spectra europium **dopant** imidazolium dodecyl methylimidazolium chloride; mass spectra europium **dopant** imidazolium dodecyl methylimidazolium chloride; hydrogen bond length imidazolium dodecyl methylimidazolium chloride monohydrate; structure imidazolium dodecyl methylimidazolium chloride monohydrate; carbon bond length imidazolium dodecyl methylimidazolium chloride monohydrate; **explosion** europium perchlorate **dopant** imidazolium dodecyl methylimidazolium nitrate; DSC europium **dopant** imidazolium deriv ionic liq crystal; lifetime fluorescence europium **dopant** imidazolium deriv ionic liq crystal; UV visible spectra europium **dopant** imidazolium deriv liq

crystal; refractive index europium **dopant** imidazolium deriv ionic liq crystal; phase transition enthalpy temp mesogenic imidazolium deriv nitrate

IT **Explosion**
Safety
(Eu perchlorate **doping** of 1-dodecyl-3-methylimidazolium nitrate liquid crystal in relation to)

IT **Doping**
(Eu salt **doping** of 1-dodecyl-3-methylimidazolium liquid crystals salts)

IT **7761-88-8**, Silver nitrate, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tuning the emission color of europium-containing 1-alkyl-3-methylimidazolium nitrate ionic liquid-crystalline phases prepared using)

IT 10025-76-0, Europium chloride (EuCl3) **10138-01-9**, Europium nitrate (Eu(NO3)3) 13537-22-9, Europium perchlorate (Eu(ClO4)3) **52093-25-1**, Europium trifluoromethanesulfonate
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(tuning the emission color of europium-containing ionic liquid-crystalline phases)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 5 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:740030 HCAPLUS
DOCUMENT NUMBER: 141:268649
TITLE: Organometallic precursor for forming metal film or pattern and method of forming metal film or pattern using the same
INVENTOR(S): Son, Hae Jung; Hwang, Euk Che; Lee, Sang Yoon; Hwang, Soon Taik; Yun, Byong Ki
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004176623	A1	20040909	US 2003-676031	2003 1002
PRIORITY APPLN. INFO.:			KR 2003-13419 A	2003 0304

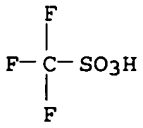
OTHER SOURCE(S): MARPAT 141:268649

AB The object of this invention is to provide an organometallic precursor for forming a metal film or pattern and a method of forming the metal film or pattern using the same. More particularly, the present invention provides an organometallic precursor containing a hydrazine-based compound coordinated with a central metal thereof, and a method of forming a metal film or pattern using the same. Further, the present invention provides a **composition** containing an organometallic compound and a hydrazine-based compound, and a method of forming a metal film or pattern using the same. Addnl., the present invention is advantageous in that a **pure** metal film or pattern is

formed using the organometallic precursor or **composition** through a simple procedure without limiting atmospheric conditions at a low temperature, and the film or pattern thus formed has excellent conductivity and morphol. Therefore, the film is useful in an electronic device field including flexible displays and large-sized TFT-LCD.

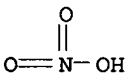
IT **2923-28-6**, Silver trifluoromethane sulfonate
7761-88-8, Silver nitrate, reactions **14104-20-2**, Silver tetrafluoroborate
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of organometallic precursor for forming metal film for integrated circuit)

RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



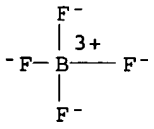
● Ag(I)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IC ICM C07F009-00
ICS C07F015-00
INCL 556042000; 556137000
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 29, 76

IT 613-94-5, Benzoichydrazide 870-46-2, tert-Butylcarbazate 1068-57-1, Acetichydrazide **2923-28-6**, Silver trifluoromethane sulfonate 2966-50-9, Silver trifluoroacetate **7761-88-8**, Silver nitrate, reactions **14104-20-2**,

Silver tetrafluoroborate 26042-64-8, Silver hexafluoroantimonate
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of organometallic precursor for forming metal film for integrated circuit)

L88 ANSWER 6 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:59405 HCAPLUS
DOCUMENT NUMBER: 140:129836
TITLE: Non-**toxic** corrosion-protection pigments based on manganese
INVENTOR(S): Sturgill, Jeffrey A.; Phelps, Andrew Wells
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 159 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004011252	A1	20040122	US 2003-341435	2003 0113
WO 2004065305	A1	20040805	WO 2003-US38192	2003 1126

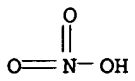
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-341435 A 2003 0113

AB Corrosion-inhibiting pigments based on manganese are described that contain a trivalent or tetravalent manganese/valence stabilizer complex. An inorg. or organic material is used to stabilize the trivalent or tetravalent manganese ion to form a compound that is sparingly soluble, exhibits low solubility, or is insol. in water, depending upon the intended usage. Specific stabilizers are chosen to control the release rate of trivalent or tetravalent manganese during exposure to water and to tailor the compatibility of the powder when used as a pigment in a chosen binder system. Stabilizers may also modify the processing and handling characteristics of the formed powders. Manganese/valence stabilizer **combinations** are chosen based on the well-founded principles of manganese coordination chemical Many manganese-valence stabilizer **combinations** are presented that can equal the performance of conventional hexavalent chromium or tetravalent lead systems. It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the tech. disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims.

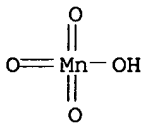
IT **10377-66-9**, Manganese nitrate **13446-10-1**,

Ammonium permanganate **30744-82-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(non-**toxic** corrosion-protection pigments based on manganese)
RN 10377-66-9 HCAPLUS
CN Nitric acid, manganese(2+) salt (8CI, 9CI) (CA INDEX NAME)



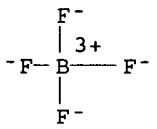
●1/2 Mn(II)

RN 13446-10-1 HCAPLUS
CN Permanganic acid (HMnO4), ammonium salt (8CI, 9CI) (CA INDEX NAME)



● NH_3

RN 30744-82-2 HCAPLUS
CN Borate(1-), tetrafluoro-, manganese(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 $Mn(II)^{2+}$

IC ICM C01G045-00
INCL 106401000; 423599000; 427327000; 427299000; 106479000; 106481000; 106499000; 106455000; 106436000; 106450000
CC 42-6 (Coatings, Inks, and Related Products)
IT Coating materials
(non-**toxic** corrosion-protection pigments based on manganese)
IT Acrylic polymers, uses
Alkyd resins
Asphalt
Chlorinated natural rubber
Epoxy resins, uses
Fluoropolymers, uses
Neoprene rubber, uses
Polyamides, uses
Polyesters, uses

Polysiloxanes, uses
Polyurethanes, uses
Polyvinyl butyrals
Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(non-**toxic** corrosion-protection pigments based on manganese)

IT Corrosion inhibitors
(pigments; non-**toxic** corrosion-protection pigments based on manganese)

IT 9010-98-4
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(neoprene rubber, non-**toxic** corrosion-protection pigments based on manganese)

IT 9002-88-4, Polyethylene
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(non-**toxic** corrosion-protection pigments based on manganese)

IT 1313-13-9, Manganese dioxide, reactions 1317-34-6, Manganese sesquioxide 1317-35-7, Manganomanganic oxide 2180-18-9, Manganese acetate 7722-64-7, Potassium permanganate 7773-01-5, Manganese chloride 7785-87-7, Manganese sulfate 7787-36-2, Barium permanganate 7790-33-2, Manganese iodide 10024-66-5, Manganese citrate 10101-50-5, Sodium permanganate 10118-76-0, Calcium permanganate 10124-54-6, Manganese phosphate 10377-62-5, Magnesium permanganate **10377-66-9**, Manganese nitrate 11097-89-5, Manganese borate 11113-71-6, Manganese fluoride 11129-60-5, Manganese oxide 11129-61-6, Manganese silicate 12421-24-8, Aluminum manganese fluoride (AlMnF5) 12626-88-9, Manganese hydroxide 13446-03-2, Manganese bromide **13446-10-1**, Ammonium permanganate 13453-79-7, Lithium permanganate 13770-16-6, Manganese perchlorate 14284-89-0, Manganese acetylacetonate 14446-13-0, Strontium permanganate 14998-36-8, Manganese tartrate 14998-38-0 15070-36-7 17375-29-0, Manganese benzoate 17375-37-0, Manganese carbonate 18820-29-6, Manganese sulfide 19664-95-0, Manganese butyrate 23414-72-4, Zinc permanganate 25327-03-1, Manganese thiocyanate 25808-75-7, Manganese fluosilicate **30744-82-2** 30868-52-1 34109-78-9 50820-29-6, Manganese glycolate 51240-96-1 51877-53-3, Manganese lactate 52458-39-6, Manganese propionate 70268-41-6 76649-09-7, Aluminum permanganate 82022-29-5, Copper permanganate 89930-76-7 101229-81-6, Cobalt permanganate 104813-96-9, Manganese chlorate 110580-21-7, Manganese oxalate 141215-16-9 627895-23-2 648903-33-7 648903-34-8 648903-36-0 648903-38-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(non-**toxic** corrosion-protection pigments based on manganese)

IT 56367-81-8 188623-20-3 648903-41-7
RL: TEM (Technical or engineered material use); USES (Uses)
(non-**toxic** corrosion-protection pigments based on manganese)

IT 7439-96-5D, Manganese, complexes with valence stabilizers
RL: TEM (Technical or engineered material use); USES (Uses)
(pigment; non-**toxic** corrosion-protection pigments based on manganese)

IT 9003-55-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(styrene-butadiene rubber, non-**toxic** corrosion-protection pigments based on manganese)

L88 ANSWER 7 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

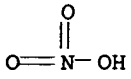
ACCESSION NUMBER: 2003:913046 HCAPLUS
DOCUMENT NUMBER: 139:392437
TITLE: Materials for degrading **contaminants**
INVENTOR(S): **Okun, Nelya; Hill, Craig L.**
PATENT ASSIGNEE(S): Emory University, USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003094977	A2	20031120	WO 2003-US14375	2003 0505
WO 2003094977	A3	20040708		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005159307	A1	20050721	US 2003-512336	2003 0505
PRIORITY APPLN. INFO.:			US 2002-377740P P	2002 0503
			WO 2003-US14375 W	2003 0505

AB Embodiments of the present invention includes **compns.**, materials including the **compns.**, methods of using the **compns.**, and methods of degrading **contaminants.** The **composition** can include a polyoxometalate/cationic silica material. In addition, the **compns.** can be made of a polyoxometalate/cationic silica material, a copper (II) salt having a **weakly bound anion**, and a nitrate salts. Further, the **compns.** can be made of a polyoxometalate/cationic silica material, a copper (II) salt having a **weakly bound anion**, a compound selected from tetraethylammonium (TEA) nitrate, tetra-n-butylammonium (TBA) nitrate, and **combinations** thereof.

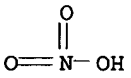
IT **3251-23-8**, Cupric nitrate **10141-05-6**, Cobalt nitrate **10421-48-4**, Ferric nitrate **13138-45-9**, Nickel nitrate **13770-18-8**, Cupric perchlorate **34946-82-2**, Cupric triflate **38465-60-0**, Cupric tetrafluoroborate
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(materials for degrading **contaminants**)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



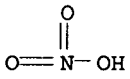
●1/2 Cu(II)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



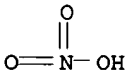
●1/2 Co(II)

RN 10421-48-4 HCAPLUS
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



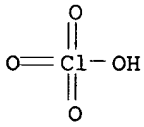
●1/3 Fe(III)

RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

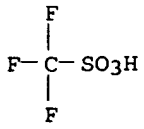
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

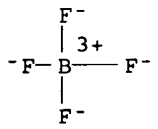
RN 34946-82-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX

NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

IC ICM A61L
CC 4-3 (**Toxicology**)
ST chem **warfare** agent **decontamination**; oxometalate cationic silica chem **warfare** agent **decontamination**; copper salt oxometalate cationic silica chem **warfare** agent **decontamination**
IT Infection
(anthrax; materials for degrading **contaminants**)
IT Biological **warfare** agents
Chemical **warfare** agents
Decontamination
(materials for degrading **contaminants**)
IT Heteropoly acids
RL: NUU (Other use, unclassified); USES (Uses)
(materials for degrading **contaminants**)
IT Aldehydes, reactions
Halogen compounds
RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(materials for degrading **contaminants**)
IT Nitrates, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(transition metal; materials for degrading **contaminants**)
IT 625455-59-6 625455-61-0 625830-47-9 625830-48-0 625830-49-1 625830-52-6
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(cationic catalyst support; materials for degrading **contaminants**)
IT 173358-70-8, Bindzil CAT
RL: NUU (Other use, unclassified); USES (Uses)
(materials for degrading **contaminants**)
IT **3251-23-8**, Cupric nitrate **10141-05-6**, Cobalt nitrate **10421-48-4**, Ferric nitrate 12200-88-3

13138-45-9, Nickel nitrate **13770-18-8**, Cupric perchlorate **34946-82-2**, Cupric triflate **38465-60-0**, Cupric tetrafluoroborate 73131-99-4 625830-46-8 625830-51-5
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(materials for degrading **contaminants**)

IT 59858-44-5P 134360-58-0P 194925-14-9P
RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(materials for degrading **contaminants**)

IT 1941-26-0, Tetraethylammonium nitrate 1941-27-1, Tetrabutylammonium nitrate
RL: NUU (Other use, unclassified); REM (Removal or disposal); PROC (Process); USES (Uses)
(materials for degrading **contaminants**)

IT 625830-54-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(materials for degrading **contaminants**)

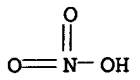
IT 50-00-0, Formaldehyde, reactions 74-93-1, Methyl mercaptan, reactions 75-07-0, Acetaldehyde, reactions 75-18-3, Dimethyl sulfide 75-44-5, Phosgene 75-50-3, Trimethylamine, reactions 79-09-4, Propionic acid, reactions 100-42-5, Styrene, reactions 107-44-8, Sarin 107-92-6, n-Butyric acid, reactions 109-52-4, n-Valeric acid, reactions 110-01-0, Tetrahydrothiophene 110-81-6, Diethyl disulfide 110-86-1, Pyridine, reactions 352-93-2, Diethyl sulfide 503-74-2, Isovaleric acid 624-92-0, Dimethyl disulfide 630-08-0, Carbon monoxide, reactions 693-07-2, 2-Chloroethyl ethyl sulfide 7440-38-2D, Arsenic, compds. 7664-41-7, Ammonia, reactions 7704-34-9D, Sulfur, compds. 7727-37-9D, Nitrogen, compds. 7783-06-4, Hydrogen sulfide, reactions
RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(materials for degrading **contaminants**)

L88 ANSWER 8 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:236094 HCAPLUS
DOCUMENT NUMBER: 139:89622
TITLE: Polyoxometalates on cationic silica Highly selective and efficient O2/air-based oxidation of 2-chloroethyl ethyl sulfide at ambient temperature
AUTHOR(S): **Okun, Nelya M.**; Anderson, Travis M.; **Hill, Craig L.**
CORPORATE SOURCE: Department of Chemistry, Emory University, Atlanta, GA, 30322, USA
SOURCE: Journal of Molecular Catalysis A: Chemical (2003), 197(1-2), 283-290
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Binary cupric nitrate and triflate systems catalyze the homogeneous air oxidation of the mustard (HD) simulant 2-chloroethyl Et sulfide (CEES) to the corresponding desired sulfoxide (CEESO) with effectively quant. selectivity in acetonitrile under ambient conditions. This activity is enhanced when cationic silica nanoparticles coated with the anionic multi-iron polyoxometalates (POMs) are also present. The POM-coated nanoparticles are prepared by treatment of aqueous suspensions of Bindzil CAT cationic silica nanoparticles (from Akzo Nobel) with aqueous solns. of the POMs, K9[(FeIII(OH2)2)3(PW9O34)2] (K94) or Na12[(FeOH2)2Fe2(P2W15O56)2] (Na125).

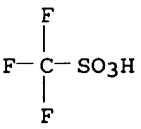
IT **3251-23-8**, Cupric nitrate **34946-82-2**, Cupric

triflate
RL: CAT (Catalyst use); USES (Uses)
(polyoxometalates on cationic silica for highly selective and efficient aerobic oxidation of 2-chloroethyl Et sulfide at ambient temperature)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 34946-82-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 60-4 (Waste Treatment and Disposal)
IT **3251-23-8**, Cupric nitrate **34946-82-2**, Cupric triflate
RL: CAT (Catalyst use); USES (Uses)
(polyoxometalates on cationic silica for highly selective and efficient aerobic oxidation of 2-chloroethyl Et sulfide at ambient temperature)
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 9 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:42704 HCAPLUS
DOCUMENT NUMBER: 138:91678
TITLE: Wood preservative **composition** containing fungicidal and bactericidal metal compounds
INVENTOR(S): Las, Allan; Liu, Xianbin; Hoff, Ed
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003010956	A1	20030116	US 2001-880597	2001 0613

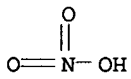
PRIORITY APPLN. INFO.: US 2001-880597
2001
0613

OTHER SOURCE(S): MARPAT 138:91678

AB The present invention is directed to a wood preservative **composition** and a method of using the same. The wood preservative **composition** has an effective amount of a fungicidal and bactericidal metal compound, a triazole compound, and at least a first and/or a second quaternary ammonium compound Alternatively, the wood preservative **composition** contains at least one addnl. agent, depending on the formulation. In one embodiment, the **composition** contains a mold inhibitor that is emulsified with the metal from the fungicidal and bactericidal metal compound in solution In another embodiment, there is an effective amount of a boron compound And in another embodiment, a combination of the boron compound and at least one amine compound

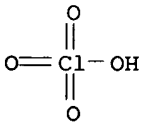
IT **3251-23-8**, Copper nitrate (Cu(NO3)2) **13770-18-8**, Copper perchlorate (Cu(ClO4)2)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(wood preservative **composition** containing fungicidal and bactericidal metal compds.)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C09K003-00
INCL 252380000
CC 43-1 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 5

IT Antibacterial agents
Fungicides
Insecticides
Wood preservatives
(wood preservative **composition** containing fungicidal and bactericidal metal compds.)

IT Borates
Quaternary ammonium compounds, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(wood preservative **composition** containing fungicidal and

bactericidal metal compds.)

IT 288-88-0D, 1H-1,2,4-Triazole, compds. 1317-39-1, Cuprous oxide, biological studies 1333-22-8, Copper hydroxide sulfate (Cu4(OH)6(SO4)) **3251-23-8**, Copper nitrate (Cu(NO3)2) 7447-39-4, Copper chloride (CuCl2), biological studies 7646-85-7, Zinc chloride (ZnCl2), biological studies 7733-02-0, Zinc sulfate (ZnSO4) 7758-98-7, Copper sulfate (CuSO4), biological studies 7779-88-6, Zinc nitrate (Zn(NO3)2) 10043-35-3D, Boric acid, compds. 12027-98-4, Zinc hydroxide sulfate (Zn4(OH)6(SO4)) 12069-69-1 12381-00-9, Zinc chloride hydroxide (Zn2Cl(OH)3) 13637-61-1, Zinc perchlorate (Zn(ClO4)2) **13770-18-8**, Copper perchlorate (Cu(ClO4)2) 16872-11-0D, Fluoroboric acid, compds. 20427-58-1, Zinc hydroxide (Zn(OH)2) 20427-59-2, Copper hydroxide (Cu(OH)2) 60207-31-0, Azaconazole 60207-90-1, Propiconazole 79983-71-4, Hexaconazole 94361-06-5, Cyproconazole 107534-96-3, Tebuconazole 107893-14-1, Zinc oxide (Zn2O) 119446-68-3, Difenoconazole 160578-43-8, Zinc carbonate hydroxide (Zn2(CO3)(OH)2) 484051-73-2, Copper chloride hydroxide (Cu2Cl(OH))
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(wood preservative **composition** containing fungicidal and bactericidal metal compds.)

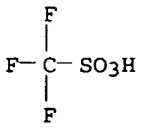
L88 ANSWER 10 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:816764 HCAPLUS
DOCUMENT NUMBER: 138:39603
TITLE: Addition Polymerization of Norbornene-Type Monomers. High Activity Cationic Allyl Palladium Catalysts
AUTHOR(S): Lipian, John; Mimna, Richard A.; Fondran, John C.; Yandulov, Dmitry; Shick, Robert A.; Goodall, Brian L.; Rhodes, Larry F.; Huffman, John C.
CORPORATE SOURCE: Promerus LLC, Brecksville, OH, 44141, USA
SOURCE: Macromolecules (2002), 35(24), 8969-8977
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A family of high activity catalysts for the vinyl addition polymerization of norbornene-type monomers based on cationic η3-allylpalladium complexes coordinated by phosphine ligands has been discovered. The palladium complex [(η3-allyl)Pd(tricyclohexylphosphine)(ether)][B(3,5-(CF3)2C6H3)4] was found to copolymerize 5-butylnorbornene and 5-triethoxysilylnorbornene (95:5 molar ratio) with truly high activity and is capable of producing more than a metric ton of copolymer per mol Pd per h. Multicomponent catalyst systems based on the addition of salts of **weakly** coordinating **anions** (e.g., Na[B(3,5-(CF3)2C6H3)4] or Li[B(C6F5)4]·2.5Et2O) to (η3-allyl)Pd(X)(PR3) (X = chloride, acetate, nitrate, trifluoroacetate, and triflate) in the presence of norbornene-type monomers were developed. NMR tube expts. confirm that Na[B(3,5-(CF3)2C6H3)4] abstrs. the Cl ligand from the palladium complex forming the cationic complex in situ. Control expts. confirmed that a high activity polymerization system requires a palladium cation containing an allyl ligand, a neutral, two-electron-donor phosphine ligand, and a weakly coordinating counterion. Those complexes where X contained electron-withdrawing groups such as trifluoroacetate or triflate were the most active catalyst precursors. η3-Allylpalladium catalyst precursors with larger cone angle phosphine ligands yield lower mol. weight polymers. The poly(norbornene) mol. wts. can be further tuned by addition of α-olefin chain transfer agents to the reaction **mixture** The catalyst systems were also found to polymerize norbornene-type monomers in aqueous media to high

conversion at very low catalyst loadings. The effect of mol. weight on thermomech. properties was **explored.**

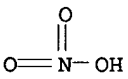
IT **2923-28-6**, Silver triflate **7761-88-8**, Silver nitrate, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of allylpalladium catalyst for polymerization of norbornene derivs.)

RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29

IT 563-63-3, Silver acetate 2622-14-2, Tricyclohexyl phosphine **2923-28-6**, Silver triflate 2966-50-9, Silver trifluoroacetate **7761-88-8**, Silver nitrate, reactions 79230-20-9, Tetrakis(bis(3,5-trifluoromethyl)phenyl) borate
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of allylpalladium catalyst for polymerization of norbornene derivs.)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

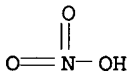
L88 ANSWER 11 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:483798 HCAPLUS
DOCUMENT NUMBER: 137:144007
TITLE: Increasing the stability of silver(I) ions in inorganic-organic hybrid membranes for C2H4/C2H6 separation by using **weakly** self-coordinating **anions** of the silver salts
AUTHOR(S): Su, C.; Kuraoka, K.; Yazawa, T.
CORPORATE SOURCE: Special Division of Green Life Technology, Ecoglass Research Group, National Institute of Advanced Industrial Science and Technology (AIST), Ikeda City, Osaka, 563-8577, Japan
SOURCE: Journal of Materials Science Letters (2002), 21(7), 525-527
CODEN: JMSLD5; ISSN: 0261-8028
PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Previously we reported a novel inorg.-organic membrane which can sep. C2H4/C2H6 at relatively low humidity. Here, we emphasize the stability of silver(I) ions, which would coordinate with the poly(N-vinylpyrrolidone) (PVP), a matrix mediate agent in the SiO2-PVP hybrid membranes. It was found that the properties of the anions of the silver salts had significant influence on the coordination between silver salt and PVP. Only when the coordination between silver(I) ion and PVP formed, would the membrane be stable in air and had a high selectivity to C2H4 at low humidity which was clarified at high separation temperature The coordination between silver salt and PVP and the hydrogen bonds between amide carbonyl and PVP and silanol groups formed a stable network, which implied that the organic, inorg. components dispersed at a mol. level. The inorg.-organic hybrid membrane was prepared from TEOS-Pr triethoxysilane sol by sol-gel method. PVP and silver salts (AgNO3, AgClO4 or AgBF4) were added. The solns. were dip-coated on alumina porous supports and heat treated. The interactions between silver salt and PVP, PVP and HO-Si.tplbond. in the membranes were studied using a FTIR spectrophotometer. The single-gas permeances of the membranes for N2, He, C2H6 and C2H4 were measured at 423K. It is obvious that the anion nature of the silver salts affects the complexation abilities of different silver salts with PVP, which was significant to the separation performance of the membranes. The complexation between AgBF4 and PVP decreased the possibility for Ag+ ions to be reduced to metallic silver in air, which was easy to occur in membranes containing AgNO3 and AgClO4. The reduction of silver salt in the membrane was a fatal problem to the separation of C2H4/C2H6.

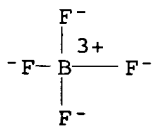
IT **7761-88-8**, Nitric acid silver(1+) salt, processes
14104-20-2, Silver fluoroborate AgBF4
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(silver source; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

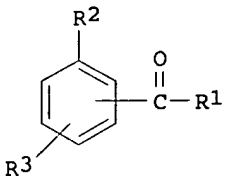
CC 57-1 (Ceramics)
Section cross-reference(s): 38, 47, 49
IT Permeability
Sol-gel processing
(increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT Hybrid organic-inorganic materials
(silica-PVP membranes; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT Membranes, nonbiological
(silica-PVP; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT 9003-39-8, Poly(N-vinylpyrrolidone)
RL: MOA (Modifier or additive use); USES (Uses)
(matrix mediate agent; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT 292177-43-6P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(membranes; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT 74-84-0, Ethane, processes 74-85-1, Ethene, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(permeating gas **mixture**; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT 7440-59-7, Helium, processes 7727-37-9, Nitrogen, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(permeating gas; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT 78-10-4, Teos 2550-02-9, Propyl triethoxysilane
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(precursor; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
IT **7761-88-8**, Nitric acid silver(1+) salt, processes
7783-93-9 **14104-20-2**, Silver fluoroborate AgBF4
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(silver source; increasing the stability of Ag+ ions in inorg.-organic hybrid membranes for C2H4/C2H6 separation using **weakly** self-coordinating **anions** of Ag salts)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 12 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:237381 HCAPLUS
DOCUMENT NUMBER: 136:262987
TITLE: Process for the preparation of aryl ketones generating reduced amounts of **toxic** byproducts
INVENTOR(S): Walker, Martin
PATENT ASSIGNEE(S): College of the Holy Cross, USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6362375	B1	20020326	US 1999-454083	1999 1203
PRIORITY APPLN. INFO.:			US 1999-454083	1999 1203

OTHER SOURCE(S): CASREACT 136:262987; MARPAT 136:262987
GI

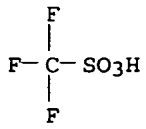


I

AB An efficient, cost-effective method useful for the production of aryl ketones I [wherein R1 = carboxylic acid residue; R2 = H, OH, alkyl, alkoxy, aryl(oxy), or halo; R3 = H, OH, alkyl, alkoxy, aryl(oxy), halo, or any **combination** thereof; or R2R3 = divalent chain forming a fused ring with the benzene] that minimizes the generation of **toxic** byproducts is disclosed. The method uses a metal triflate salt, preferably a rare metal triflate, to catalyze the reaction between the carboxylic acid substrate and the aromatic substrate. The H2O generated by the reaction is collected and removed during the process. For example, praseodymium (III) trifluoromethanesulfonate, CF3SO3H, anisole, and p-toluic acid were refluxed together in toluene with azeotropic removal of the lower water layer for 22 h to afford 4-methoxy-4'-methylbenzophenone (60%).

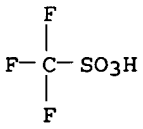
IT **52093-27-3**, Praseodymium (III) trifluoromethanesulfonate **52093-30-8 54761-04-5 76089-77-5**, Cerium(III) trifluoromethanesulfonate **139177-62-1**, Dysprosium (III) trifluoromethanesulfonate **144026-79-9 161337-67-3**
RL: CAT (Catalyst use); USES (Uses)
(catalyst; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)

RN 52093-27-3 HCAPLUS
CN Methanesulfonic acid, trifluoro-, praseodymium(3+) salt (9CI) (CA INDEX NAME)



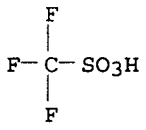
●1/3 Pr(III)

RN 52093-30-8 HCAPLUS
CN Methanesulfonic acid, trifluoro-, yttrium(3+) salt (9CI) (CA INDEX NAME)



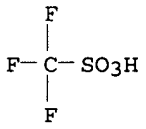
●1/3 Y(III)

RN 54761-04-5 HCAPLUS
CN Methanesulfonic acid, trifluoro-, ytterbium(3+) salt (9CI) (CA INDEX NAME)



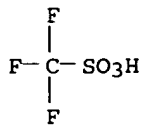
●1/3 Yb(III)

RN 76089-77-5 HCAPLUS
CN Methanesulfonic acid, trifluoro-, cerium(3+) salt (9CI) (CA INDEX NAME)



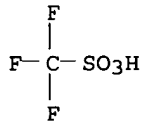
●1/3 Ce(III)

RN 139177-62-1 HCAPLUS
CN Methanesulfonic acid, trifluoro-, dysprosium(3+) salt (9CI) (CA INDEX NAME)



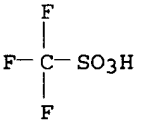
●1/3 Dy(III)

RN 144026-79-9 HCAPLUS
CN Methanesulfonic acid, trifluoro-, scandium(3+) salt (9CI) (CA INDEX NAME)



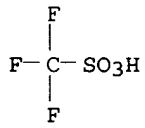
●1/3 Sc(III)

RN 161337-67-3 HCAPLUS
CN Methanesulfonic acid, trifluoro-, hafnium(4+) salt (9CI) (CA INDEX NAME)



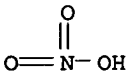
●1/4 Hf(IV)

IT **52093-26-2P**, Lanthanum (III) Triflate
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(catalyst; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
RN 52093-26-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, lanthanum(3+) salt (9CI) (CA INDEX NAME)



●1/3 La(III)

IT **13823-29-5**, Thorium (IV) nitrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
RN 13823-29-5 HCAPLUS
CN Nitric acid, thorium(4+) salt (8CI, 9CI) (CA INDEX NAME)



●1/4 Th(IV)

IC ICM C07C045-46
INCL 568319000
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
ST aryl ketone prepn carboxylic acid Friedel Crafts acylation; rare metal triflate catalyst aryl ketone prepn; **toxic** byproduct redn aryl ketone prepn
IT Friedel-Crafts reaction
Green chemistry
(process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
IT Friedel-Crafts reaction catalysts
(rare metal triflate; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
IT **52093-27-3**, Praseodymium (III) trifluoromethanesulfonate **52093-30-8 54761-04-5 76089-77-5**, Cerium(III) trifluoromethanesulfonate 88189-03-1 128008-30-0 **139177-62-1**, Dysprosium (III) trifluoromethanesulfonate **144026-79-9 161337-67-3**
RL: CAT (Catalyst use); USES (Uses)
(catalyst; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
IT 27607-68-7P **52093-26-2P**, Lanthanum (III) Triflate
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(catalyst; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
IT 90-96-0P, 4,4'-Dimethoxybenzophenone 611-97-2P, 4,4'-Dimethylbenzophenone 23886-71-7P, 4-Methoxy-4'-methylbenzophenone 84836-32-8P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)
IT 88-09-5, 2-Ethylbutanoic acid 99-94-5, p-Toluic acid 100-66-3, Anisole, reactions 108-88-3, Toluene, reactions 587-26-8 1493-13-6, Trifluoromethanesulfonic acid **13823-29-5**, Thorium (IV) nitrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; process for preparation of aryl ketones via modified Friedel-Crafts acylation catalyzed by rare metal triflates that generates reduced amts. of **toxic** byproducts)

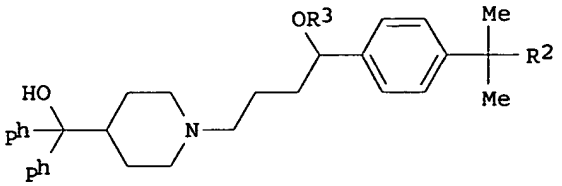
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 13 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:107296 HCAPLUS
DOCUMENT NUMBER: 136:150996
TITLE: New processes for the production of fexofenadine
INVENTOR(S): Milla, Federico Junquera
PATENT ASSIGNEE(S): Texcontor Etablissement, Liechtenstein
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010115	A1	20020207	WO 2001-IB1294	2001 0719
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1307423	A1	20030507	EP 2001-947748	2001 0719
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003166682	A1	20030904	US 2003-333974	2003 0319

PRIORITY APPLN. INFO.: GB 2000-18691 A 2000 0728
WO 2001-IB1294 W 2001 0719

OTHER SOURCE(S): CASREACT 136:150996; MARPAT 136:150996
GI



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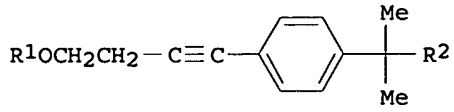

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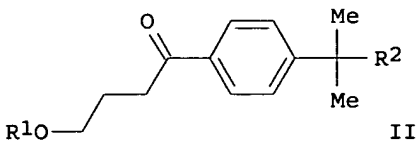
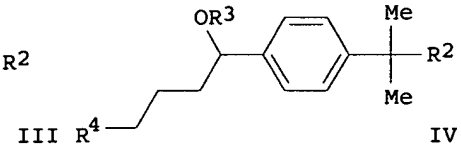


III



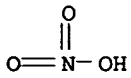
IV

AB An improved process for the manufacture of fexofenadine is described, in which a compound of formula (I; wherein R2 represents CO2H, CO2-C1-6 alkyl or cyano; and R3 represents hydrogen, mesylate, triflate, tosylate or carboxy-C1-6-alkyl, or a salt thereof) is prepared by: (1) hydrating a compound of formula (II; wherein R1 represents hydrogen or carboxy-C1-6-alkyl; and R2 is a hereinbefore defined), with a copper and/or silver compound in the presence of palladium or a compound thereof to yield a compound of formula (III; wherein R1 and R2 are as hereinbefore defined); (2) converting said compound of formula III into a compound of formula (IV; wherein R2 and R3 are as hereinbefore defined and R4 represents a halogen atom), and (3) reacting said compound of formula IV with azacyclonol. This process avoids the use of hazardous chems. and the need for laborious and time consuming regioisomer separation and gives fexofenadine in high yiedls and short reaction time. Thus, a solution of 4-(4-hydroxy-1-butynyl)-α,α-dimethylbenzeneacetic acid Me ester in aqueous methanol was treated with copper tetrafluoroborate and refluxed for 12 h to give Me 4-(4-hydroxy-1-oxobutyl)-α,α-dimethylphenylacetate (V). A CH2Cl2 solution of V was stirred with 48% aqueous HBr solution for 2 h to give Me 4-(4-bromo-1-oxobutyl)-α,α-dimethylphenylacetate (VI). A THF solution of VI was added dropwise to a cooled (-10°) solution of NaBH4 in MeOH while maintaining the temperature at <5° to give, after 2 h, Me 4-(4-bromo-1-hydroxybutyl)-α,α-dimethylphenylacetate which was acetylated by acetyl chloride in the presence of 4-dimethylaminopyridine in pyridine at 0° for 1 h 40 min to give Me 4-(1-acetoxy-4-bromobutyl)-α,α-dimethylphenylacetate (VII). Crude VII, azacyclonol, KHCO3, and NaI were heated at reflux in butanone for 3 h to give Me 4-[4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-acetoxybutyl]-α,α-dimethylphenylacetate which was heated at reflux with 10 M NaOH, water, and MeOH for 3.5 h and acidified to pH 5 with AcOH to give 4-[4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-hydroxybutyl]-α,α-dimethylphenylacetic acid (fexofenadine).

IT **3251-23-8 38465-60-0**, Copper tetrafluoroborate
RL: CAT (Catalyst use); USES (Uses)
(processes for production of fexofenadine via hydration of p-(hydroxybutynyl)-α,α-dimethylbenzeneacetic acid Me ester, followed by bromination, acetylation, and amination with azacyclonol)

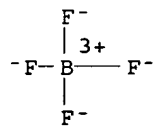
RN 3251-23-8 HCAPLUS

CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

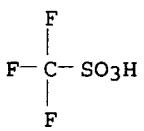
IC ICM C07C069-738
ICS C07C067-313; C07D211-22; A61K031-445; A61P037-08
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1
IT 2923-28-6, Silver trifluoromethanesulfonate **3251-23-8** 7440-50-8D, Copper, Nafion exchanged with 7447-39-4, Copper chloride, uses 7758-98-7, Copper sulfate, uses 7761-88-8, Silver nitrate, uses 13965-03-2, Bistriphenylphosphine palladium dichloride 14104-20-2, Silver fluoroborate 14220-64-5, Bis(benzonitrile) palladium dichloride 14221-01-3, Tetrakis(triphenylphosphine)palladium(0) 26042-63-7, Silver hexafluorophosphate **38465-60-0**, Copper tetrafluoroborate 42152-44-3, Copper trifluoromethanesulfonate
RL: CAT (Catalyst use); USES (Uses)
(processes for production of fexofenadine via hydration of p-(hydroxybutynyl)-α,α-dimethylbenzeneacetic acid Me ester, followed by bromination, acetylation, and amination with azacyclonol)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 14 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:890533 HCAPLUS
DOCUMENT NUMBER: 136:118934
TITLE: Wide-Angle X-ray Scattering Studies on the Structural Properties of Polymer Electrolytes Containing Silver Ions
AUTHOR(S): Choi, Sangwook; Kim, Jong Hak; Kang, Yong Soo
CORPORATE SOURCE: Center for Facilitated Transport Membranes, Korea Institute of Science Technology, Seoul, 130-650, S. Korea
SOURCE: Macromolecules (2001), 34(26), 9087-9092
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Wide-angle X-ray scattering (WAXS) has been used to study the structural properties of polymer electrolytes containing silver ions. The WAXS spectra of **pure** poly(2-ethyl-2-oxazoline) (POZ) and poly(vinylpyrrolidone) (PVP) showed two broad amorphous peaks. The first of these peaks was assigned to the interchain distance, and the second peak was assigned to the distance between the pendant groups of the polymer chains. When silver salts such as AgBF4, AgCF3SO3, or AgClO4 were introduced into the polymer matrixes, their silver ions coordinated with the carbonyl oxygens on the pendant groups to form polymer/silver salt complexes. In the case of the PVP/silver salt complexes, the first peak shifted to lower angle and became narrower with increasing silver concentration, indicative of an increase in the interchain distance and ordering. In contrast, the position of the second peak remained almost constant For the POZ/silver salt complexes, however, the positions of both peaks shifted to higher scattering angle with increasing silver concentration until the mole ratio of carbonyl oxygen to silver reached about 3:1. Further increase of the concentration caused the first peak to shift to lower angle while the second peak remained almost constant, which is similar to the behavior of the PVP/Ag salt complexes. The difference in the behavior of the PVP/Ag and POZ/Ag salt complexes may arise from different strengths of the transient cross-links formed by silver cations with the pendant groups of POZ and PVP. The Bragg d spacing results calculated from the second peak indicate that the silver ions coordinate more strongly with the pendant groups in the POZ/AgClO4 complex than in the POZ/AgCF3SO3 and POZ/AgBF4 complexes. It is worth noting that the Bragg d spacings for the POZ/silver and PVP/silver salt complexes were very different at low silver concns. but approach almost the same value at high silver concns. (e.g., at a mole ratio of [C=O]:[Ag] = 1:1). These findings are consistent with our previous results on facilitated olefin transport and glass transition temperature behavior in silver polymer electrolyte membranes. We therefore conclude that the facilitated olefin transport and glass transition temperature behavior in polymer electrolytes are strongly related to the structural change that occurs upon coordination of silver cations with the carbonyl oxygens of the polymeric chains.

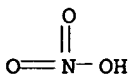
IT **2923-28-6**, Silver triflate **7761-88-8**, Silver nitrate, uses **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(polyethyloxazoline, polyvinylpyrrolidone complexes; structural studies of polymer electrolytes containing silver ions)

RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



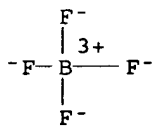
● Ag(I)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

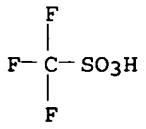
CC 36-2 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 73
IT Permeation
(of **mixed** gases on polymer electrolytes containing silver ions)
IT **2923-28-6**, Silver triflate **7761-88-8**, Silver nitrate, uses 7783-93-9, Silver perchlorate **14104-20-2**, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(polyethyloxazoline, polyvinylpyrrolidone complexes; structural studies of polymer electrolytes containing silver ions)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 15 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:614734 HCAPLUS
DOCUMENT NUMBER: 135:323121
TITLE: Formation of Silver Nanoparticles Induced by Poly(2,6-dimethyl-1,4-phenylene oxide)
AUTHOR(S): Kim, Hoon Sik; Ryu, Jae Hee; Jose, Binoy; Lee, Byung Gwon; Ahn, Byoung Sung; Kang, Yong Soo
CORPORATE SOURCE: CFC Alternatives Research Center and Center for Facilitated Transport Membrane, Korea Institute of Science and Technology, Seongbukgu, Seoul, 136-791, S. Korea
SOURCE: Langmuir (2001), 17(19), 5817-5820
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Colloidal Ag nanoparticles were easily obtained by reacting AgX (X = BF4, PF6, SbF6, SO3CF3, ClO4, NO3) with poly(2,6-dimethyl-1,4-phenylene oxide) (PPO) in a **mixed** solvent system of CHCl3 and MeOH in the absence of UV irradiation Rapid formation of colloidal Ag nanoparticles was also observed when a Ag salt was added to a CHCl3 solution containing PPO and 1-hexene. UV-visible spectra and transmission electron micrographs show that the colloidal Ag particles formed from these methods are nanosized, stable, and uniformly distributed. PPO is oxidized in the presence of a Ag

salt to give quinone and quinone derivs. which were analyzed by GC-Mass. A plausible mechanism for the formation of Ag nanoparticles is proposed from the redox reaction of PPO in the presence of a Ag salt.

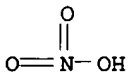
IT **2923-28-6 7761-88-8**, Silver nitrate (AgNO3), processes **14104-20-2**, Silver fluoroborate (AgBF4)
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(formation of silver nanoparticles obtained by reacting poly(dimethylphenylene oxide) with)

RN 2923-28-6 HCAPLUS
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



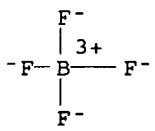
● Ag(I)

RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 22, 78

IT IR spectra
(mid-IR; of **pure** polydimethylphenylene oxide (PPO) and PPO-AgBF4 films prepared from PPO-AgBF4 solution containing hexene)

IT **2923-28-6 7761-88-8**, Silver nitrate (AgNO3), processes 7783-93-9, Silver perchlorate (AgClO4) **14104-20-2**, Silver fluoroborate (AgBF4) 26042-63-7, Silver hexafluorophosphate (AgPF6) 26042-64-8, Silver hexafluoroantimonate (AgSbF6)
RL: PEP (Physical, engineering or chemical process); RCT

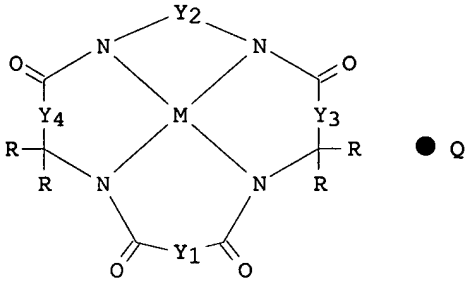
(Reactant); PROC (Process); RACT (Reactant or reagent)
(formation of silver nanoparticles obtained by reacting poly(dimethylphenylene oxide) with)
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 16 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:754402 HCAPLUS
DOCUMENT NUMBER: 133:339515
TITLE: Metal ligand containing **bleaching compositions**
INVENTOR(S): Collins, Terrence J.; Horwitz, Colin P.
PATENT ASSIGNEE(S): Carnegie Mellon University, USA
SOURCE: U.S., 29 pp., Cont.-in-part of U.S. 5,853,428.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6136223	A	20001024	US 1998-75598	1998 0511
US 5876625	A	19990302	US 1996-684670	1996 0722
US 5853428	A	19981229	US 1997-804776	1997 0224
CA 2332134	AA	19991118	CA 1999-2332134	1999 0510
CA 2332134	C	20050920		
WO 9958634	A1	19991118	WO 1999-US10157	1999 0510
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9939778	A1	19991129	AU 1999-39778	1999 0510
AU 763682	B2	20030731		
BR 9910409	A	20010109	BR 1999-10409	1999 0510
EP 1078033	A1	20010228	EP 1999-922881	1999 0510
EP 1078033	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002514693	T2	20020521	JP 2000-548427	1999 0510
NZ 507826	A	20030829	NZ 1999-507826	

				1999 0510
RU 2234528	C2	20040820	RU 2000-128026	1999 0510
AT 300599	E	20050815	AT 1999-922881	1999 0510
US 6241779	B1	20010605	US 2000-564419	2000 0504
NO 2000005505	A	20010109	NO 2000-5505	2000 1101
PRIORITY APPLN. INFO.:			US 1996-684670 A2	1996 0722
			US 1997-804776 A2	1997 0224
			US 1998-75598 A	1998 0511
			WO 1999-US10157 W	1999 0510

OTHER SOURCE(S): MARPAT 133:339515
GI



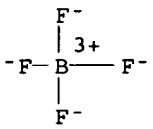
I

AB The invention provides a novel **composition** and method for removing or reducing levels of recalcitrant constituents from an effluent, such as lignin chromophores, absorbable or adsorbable organic halogens (AOX species), such as chlorinated phenols, dioxins, dibenzofurans, biphenyls, and high mol. weight material produced in the pulp and paper **bleaching** operations which includes using a **composition** comprised of (a) an amount of a source of an oxidant effective for oxidizing and thereby reducing the levels of such constituents and (b) an oxidatively stable oxidant activator having the structure I wherein Y1, Y3 and Y4 each represent a bridging group having zero, one, two or three carbon containing nodes for substitution, and Y2 is a bridging group having at least one carbon containing node for substitution, each said node containing a C(R), C(R1)(R2), or a C(R)2 unit and each R substituent is the same or different from the remaining R substituents; M is a transition metal with oxidation states of I, II, III, IV, V, VI, VII or VIII or selected from Groups 3, 4, 5, 6, 7, 8, 9, 10 and 11 of

the Periodic Table of the Elements; and Q is any counterion which would balance the charge of the compound on a stoichiometric basis.

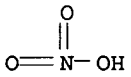
IT **14104-20-2**, Silver tetrafluoroborate **15078-94-1**, Ammonium cerium nitrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 15078-94-1 HCAPLUS
CN Nitric acid, ammonium cerium salt (8CI, 9CI) (CA INDEX NAME)



●x Ce(x)

●x NH_3

IC ICM C01B015-00
ICS C01B015-055; C11D003-39
INCL 252186330
CC 60-2 (Waste Treatment and Disposal)
Section cross-reference(s): 41, 43
ST **bleaching compn** metal ligand paper manuf; wastewater paper manuf **bleaching**
IT Wastewater treatment
(decolorization; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)
IT Macrocyclic compounds
Macrocyclic compounds
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(ligands, tetraamido metal ligand complexes; as **bleaching compns.** and application to pulp and paper wastewater treatment)
IT Ligands
Ligands
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(macrocyclic, tetraamido metal ligand complexes; as

bleaching compns. and application to pulp and paper wastewater treatment)

IT Cellulose pulp
Paper
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT Chlorides, processes
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(organic; metal ligand containing **bleaching compns** . and application to pulp and paper wastewater treatment)

IT Wastewater treatment
(oxidation; metal ligand containing **bleaching compns** . and application to pulp and paper wastewater treatment)

IT Chromophores
(removal from pulp and paper wastewater; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT Macrocyclic compounds
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(tetraamido metal ligand complexes; as **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 2001-45-8P, Tetraphenylphosphonium chloride 136668-03-6P 136668-04-7P 136668-05-8P 202401-72-7P 202401-74-9P 202401-76-1P 202401-77-2P 202401-79-4P 202401-80-7P 250670-72-5P 303765-47-1P 303765-48-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 202401-89-6P 303174-62-1P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 303765-49-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 22042-96-2, Dequest 2066
RL: NUU (Other use, unclassified); USES (Uses)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 95-54-5, 1,2-Diaminobenzene, reactions 143-33-9, Sodium cyanide 479-27-6, 1,8-Naphthalenediamine 594-19-4, tert-Butyllithium 2756-85-6, 1-Amino-1-cyclohexane carboxylic acid 3171-45-7, 1,2-Diamino-4,5-dimethylbenzene 5348-42-5, 1,2-Diamino-4,5-dichlorobenzene 5659-93-8, Dimethyl malonyl dichloride **14104-20-2**, Silver tetrafluoroborate **15078-94-1**, Ammonium cerium nitrate 27841-33-4, 1,2-Diamino-4,5-dimethoxybenzene 202401-85-2 202401-87-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 88-06-2, 2,4,6-Trichlorophenol
RL: REM (Removal or disposal); PROC (Process)
(metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 7722-84-1, Hydrogen peroxide, reactions
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(oxidizing agent; metal ligand containing **bleaching**

compns. and application to pulp and paper wastewater treatment)

IT 62-57-7, α-Methyl alanine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with diethyl-, and dimethylmalonyl dichloride; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 54505-72-5, Diethyl malonyl dichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with α-methylalanine; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

IT 2768-90-3, Pinacyanol chloride
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(removal from pulp/paper wastewater; metal ligand containing **bleaching compns.** and application to pulp and paper wastewater treatment)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 17 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:740958 HCAPLUS
DOCUMENT NUMBER: 133:277509
TITLE: Stable aqueous antimicrobial **compositions** containing 3-isothiazolone
INVENTOR(S): El A'mma, Beverly Jean
PATENT ASSIGNEE(S): Rohm and Haas Company, USA
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

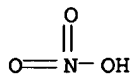
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1044609	A1	20001018	EP 2000-302826	2000 0404
EP 1044609	B1	20021120		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1270763	A	20001025	CN 2000-106553	2000 0412
US 6211213	B1	20010403	US 2000-547407	2000 0412
JP 2000327506	A2	20001128	JP 2000-113502	2000 0414
BR 2000001621	A	20010403	BR 2000-1621	2000 0414
PRIORITY APPLN. INFO.:			US 1999-129813P P	1999 0416

AB Aqueous antimicrobial **compns.** containing a 3-isothiazolone compound are stabilized with organic oxidants and copper salts.

IT **3251-23-8 13770-18-8**, Copper(2+) perchlorate
RL: MOA (Modifier or additive use); USES (Uses)

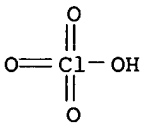
(cupric ion source as stabilizer in aqueous antimicrobial **compns.** containing 3-isothiazolone)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM A01N043-80
ICS A01N025-22
CC 5-2 (Agrochemical Bioregulators)
IT Antimicrobial agents
Pesticide formulations
(stable aqueous antimicrobial **compns.** containing 3-isothiazolone)
IT **3251-23-8** 7447-39-4, Copper(2+) chloride, uses 7758-98-7, Copper sulfate, uses 7789-45-9, Copper (II) bromide **13770-18-8**, Copper(2+) perchlorate 14984-71-5 26506-47-8, Copper chlorate
RL: MOA (Modifier or additive use); USES (Uses)
(cupric ion source as stabilizer in aqueous antimicrobial **compns.** containing 3-isothiazolone)
IT 65-85-0, Benzoic acid, uses 75-91-2, tert-Butyl hydroperoxide 79-21-0, Peracetic acid 94-36-0, Benzoylperoxide, uses 107-71-1, tert-Butyl peroxyacetate 110-05-4 123-23-9, Succinic acid peroxide 124-43-6 614-45-9, tert-Butyl peroxybenzoate 937-14-4, 3-Chloroperoxybenzoic acid 1203-40-3, Peroxyphthalic acid 1338-23-4, 2-Butanone peroxide 3025-88-5, 2,5-Dihydroperoxy-2,5-dimethylhexane 5457-66-9, tert-Butyl octanoate
RL: MOA (Modifier or additive use); USES (Uses)
(organic oxidant as stabilizer in aqueous antimicrobial **compns**. containing 3-isothiazolone)
IT 1003-07-2D, 3-Isothiazolone, derivs 2682-20-4, 2-Methyl-3-Isothiazolone 2682-21-5, 2-Ethyl-3-Isothiazolone 26172-55-4 26542-23-4, 4,5-DiChloro-2-methyl-3-Isothiazolone 33344-74-0, 5-Chloro-2-ethyl-3-Isothiazolone 55965-84-9
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(stable aqueous antimicrobial **compns.** containing)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

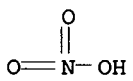
L88 ANSWER 18 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:779125 HCAPLUS
DOCUMENT NUMBER: 132:15648
TITLE: **Composition** and method for reducing diarrhea in poultry and swine
INVENTOR(S): Brinton, Gene; Mourning, Jackie Brinton
PATENT ASSIGNEE(S): Brinton Veterinary Supply, Inc., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5997911	A	19991207	US 1996-703638	1996 0827
PRIORITY APPLN. INFO.:			US 1996-703638	1996 0827

AB A **composition** and method for reducing the incidence of Poult Enteritis Mortality Syndrome in young turkeys, flushing in mature turkeys, and scours in swine. The **composition** of the present invention comprises, in combination, a simple copper (II) salt, a hydroxycarboxylic acid, and a buffering agent solubilized within the drinking water of turkeys and/or swine in an antidiarrheal effective dosage as preventative maintenance in avoiding the diarrheal conditions associated with PEMS, flushing, and scours. In a preferred embodiment, the simple copper (II) salt comprises copper sulfate pentahydrate, the hydroxycarboxylic acid comprises anhydrous citric acid, and the buffering, agent comprises ammonium carbonate.

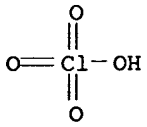
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate **34946-82-2**, Cupric trifluoromethanesulfonate **38465-60-0**, Cupric tetrafluoroborate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(copper salt **compns.** for reducing diarrhea in poultry and swine)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



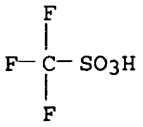
●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



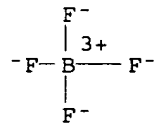
●1/2 Cu(II)

RN 34946-82-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

IC ICM A61K031-30
ICS A61K031-28; A61K031-19; A61K033-34
INCL 424632000
CC 63-6 (Pharmaceuticals)
IT Antidiarrheals
Poultry
Swine
(copper salt **compns.** for reducing diarrhea in poultry and swine)
IT Carboxylic acids, biological studies
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxy; copper salt **compns.** for reducing diarrhea in poultry and swine)
IT Drugs
(veterinary; copper salt **compns.** for reducing diarrhea in poultry and swine)
IT 506-87-6, Ammonium carbonate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(buffer; copper salt **compns.** for reducing diarrhea in poultry and swine)

IT 50-21-5, Lactic acid, biological studies 50-81-7, L-Ascorbic acid, biological studies 77-92-9, biological studies 87-69-4, Tartaric acid, biological studies 526-95-4, Gluconic acid 3562-74-1, Homocitric acid
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(copper salt **compns**. for reducing diarrhea in poultry and swine)

IT 142-71-2, Cupric acetate 527-09-3, Cupric gluconate 815-82-7, Cupric tartrate, biological studies 866-82-0, Cupric citrate 1184-54-9, Cupric methoxide 1184-64-1, Cupric carbonate **3251-23-8**, Cupric nitrate 7440-50-8D, Copper, salts, biological studies 7758-99-8, Cupric sulfate pentahydrate 11112-08-6, Cupric diisopropyl salicylate 12771-00-5, Copper tungsten oxide 13395-16-9, Cupric acetylacetonate 13767-34-5, Cupric molybdate **13770-18-8**, Cupric perchlorate 15192-76-4, Cupric thiocyanate 16039-52-4, Cupric lactate 18911-01-8, Copper glycolate **34946-82-2**, Cupric trifluoromethanesulfonate **38465-60-0**, Cupric tetrafluoroborate 819869-34-6
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(copper salt **compns**. for reducing diarrhea in poultry and swine)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 19 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:279680 HCAPLUS
DOCUMENT NUMBER: 130:292815
TITLE: Stable isothiazolone derivative microbicide **formulation**
INVENTOR(S): Mattox, John Robert
PATENT ASSIGNEE(S): Rohm and Haas Company, USA
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 910952	A1	19990428	EP 1998-201682	19980520
EP 910952	B1	20021030		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 5955486	A	19990921	US 1998-23447	19980213
AU 9864890	A1	19990520	AU 1998-64890	19980512
ES 2186090	T3	20030501	ES 1998-201682	19980520
TW 381962	B	20000211	TW 1998-87108142	19980526
BR 9801714	A	20000425	BR 1998-1714	19980527
CN 1215556	A	19990505	CN 1998-109796	

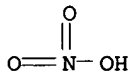
					1998 0611
CN 1106150	B	20030423			
JP 11158014	A2	19990615	JP 1998-215044		1998 0730
PRIORITY APPLN. INFO.:			US 1997-63351P	P	1997 1028

AB Stable microbicidal **compns.** containing a 3-isothiazolone compound, chlorate or perchlorate salts, copper salts and water are disclosed. In the presence of small amts. of Cu2+, chlorate or perchlorate salts stabilize the 3-isothiazolone derivative and inhibit precipitation Applications include cooling towers, boilers, wastewater treatment, mineral slurries, paints, metal-working fluids, etc.

IT **3251-23-8**, Copper(II) nitrate **13770-18-8**, Copper(II) perchlorate
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers in isothiazolone derivative microbicide formulations)

RN 3251-23-8 HCAPLUS

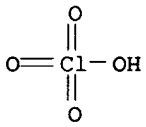
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM A01N043-80
ICS A01N025-22

ICI A01N043-80, A01N059-20, A01N059-00

CC 5-2 (Agrochemical Bioregulators)

IT 142-71-2, Copper(II) acetate **3251-23-8**, Copper(II) nitrate 3811-04-9, Potassium chlorate 7447-39-4, Copper(II) chloride, uses 7601-89-0, Sodium perchlorate 7758-98-7, Copper(II) sulfate, uses 7775-09-9, Sodium chlorate 7778-74-7, Potassium perchlorate 7789-45-9, Copper(II) bromide **13770-18-8**, Copper(II) perchlorate 14721-21-2 14984-71-5 15158-11-9D, Copper(II), salts, uses
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers in isothiazolone derivative microbicide formulations)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

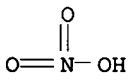
L88 ANSWER 20 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:210877 HCAPLUS
DOCUMENT NUMBER: 130:343577
TITLE: Conductance and thermodynamic study of the interaction of some transition and heavy metals with phenyl-aza-15-crown-5 (PhA15C5) in different binary acetonitrile-water solvent **mixtures**
AUTHOR(S): Marji, Deeb; Fraihat, Safwan
CORPORATE SOURCE: Chemistry Department, Yarmouk University, Irbid, Jordan
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (1999), 33(1), 99-108
CODEN: JIPCF5
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The molar conductance of solns. containing Fe(ClO4)3, Cu(ClO4)2, Fe(NO3)3, Cu(NO3)2, Hg(NO3)2 and Cd(NO3)2 salts as function of the phenyl-aza-15-crown-5 concentration was measured in different acetonitrile-water mixts. at various temps.; the salt-PhA15C5 complex formation consts. were determined The stability of the nitrate salts decreases in the order Hg2+ > Cu2+ > Fe3+ > Cd2+ and the formation consts. decrease as the percentage of acetonitrile decreases in the mixture The counter anion also affects the stability of the complexes; the metal perchlorate-crown complexes are more stable than those of the metal nitrate salts. The enthalpy and entropy of the complexation were calculated and were found to be sensitive to solvent **composition**

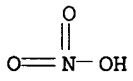
IT **3251-23-8 10421-48-4 13770-18-8**
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(conductance and thermodn. study of complexation between transition or heavy metal salts and phenyl-aza-15-crown-5 in aqueous acetonitrile solns.)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



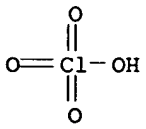
●1/2 Cu(II)

RN 10421-48-4 HCAPLUS
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



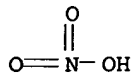
●1/2 Cu(II)

CC 68-3 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
Section cross-reference(s): 29, 78
IT **3251-23-8** 10045-94-0, Mercuric nitrate 10325-94-7
10421-48-4 13537-24-1, Ferric perchlorate
13770-18-8 14302-87-5, Hg2+, processes 14797-55-8,
Nitrate, processes 14797-73-0, Perchlorate 15158-11-9, Cu2+,
processes 20074-52-6, Fe3+, processes 22537-48-0, Cd2+,
processes 66750-10-5
RL: PEP (Physical, engineering or chemical process); RCT
(Reactant); PROC (Process); RACT (Reactant or reagent)
(conductance and thermodn. study of complexation between
transition or heavy metal salts and phenyl-aza-15-crown-5 in
aqueous acetonitrile solns.)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L88 ANSWER 21 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:195552 HCAPLUS
DOCUMENT NUMBER: 130:213353
TITLE: Copper speciation in aqueous solutions of
fulvic acid and related molecular weight
distributions
AUTHOR(S): Wolf, M.; Teichmann, G.; Hoque, E.; Szymczak,
W.; Schimmack, W.
CORPORATE SOURCE: Institute Hydrology, GSF-National Research
Center Environment Health, Neuherberg,
D-85764, Germany
SOURCE: Fresenius' Journal of Analytical Chemistry
(1999), 363(5-6), 596-599
CODEN: FJACES; ISSN: 0937-0633
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Potentiometric and fluorescence measurements of aqueous solns. of
fulvic acid containing Cu(NO3)2 or Cu(ClO4)2, resp., were carried out
at 25° and pH 5.5 to determine naturally occurring Cu species.
The fulvic acid used was isolated by XAD-8 from filtrated (0.3
μm) water of a peat bog in the Dachauer Moos near Munich. From
the results an operational mol. weight of fulvic acid of ≈750
g/mol was estimated, which was confirmed by mol. weight distributions
determined by high-performance size-exclusion chromatog. (HPSEC), gel
permeation chromatog. (GPC), and time-of-flight SIMS. Using this
mol. weight and assuming that mainly 1:1 Cu-fulvic acid complexes are
formed, a conditional stability constant of the Cu-fulvic acid
complex of 105.9 could be calculated These data are essential for the
assessment of organic carrier-mediated migration of Cu as well as of
the **toxicol.** risk potential of Cu in aqueous environment and
can be used as input parameters for geochem. modeling of the Cu
species distribution in aqueous solns.
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric
perchlorate
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2

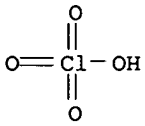
or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

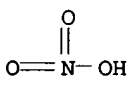
CC 61-3 (Water)
Section cross-reference(s): 79
IT Wetland waters
(bog; copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in)
IT Molecular weight distribution
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)
IT Fulvic acids
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)
IT 7732-18-5, Water, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)
IT 7440-50-8D, Copper, fulvic acid complex, analysis
RL: ANT (Analyte); FMU (Formation, unclassified); ANST (Analytical study); FORM (Formation, nonpreparative)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(copper speciation in aqueous solns. of fulvic acid containing Cu(NO3)2 or Cu(ClO4)2 and related mol. weight distributions for **toxicol.** risk assessment in bog waters)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 22 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:282908 HCAPLUS
DOCUMENT NUMBER: 129:9202
TITLE: Real Ionic Solutions in the Mean Spherical Approximation. 3. Osmotic and Activity Coefficients for Associating Electrolytes in the Primitive Model
AUTHOR(S): Simonin, Jean-Pierre; Bernard, Olivier; Blum, Lesser
CORPORATE SOURCE: Laboratoire Liquides Ioniques et Interfaces Chargees (LI2C-URA CNRS 430), Universite Paris VI, Paris, 75252, Fr.
SOURCE: Journal of Physical Chemistry B (1998), 102(22), 4411-4417
CODEN: JPCBFK; ISSN: 1089-5647
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Osmotic and activity coeffs. for aqueous solns. of **pure** associating electrolytes are described by a MSA-like theory that includes the following effects: association (ion pairing or chemical) and solvation. The association of ions of opposite charges is described using the BIMSA, based on the Wertheim formalism. As for nonassocg. electrolytes, the hydration is taken into account by introducing a cation size and permittivity that are allowed to vary with concentration New expressions for the osmotic and activity coefficient are given that account for this variation. These equations have been applied to fit data for a variety of aqueous solns. of **pure** salts at 25°. About 80 new salts have been treated, including perchlorates, nitrates, hydroxides, and sulfates. For some solns., good fits could be obtained up to very high concns., such as 25 mol kg-1 for ammonium nitrate and 34 mol kg-1 for potassium nitrite. Solns. of NaOH and nitric acid could be described to 10 mol kg-1. A description for sulfuric acid has been obtained at low concentration (below 0.1 mol kg-1). Another description has been made for high concns. (between 6 and 28 mol kg-1) by using a chemical plausible model. In most cases the association constant is of the same order of magnitude as the literature value when available.

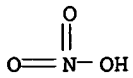
IT **3251-23-8 13138-45-9**, Nickel nitrate
13770-18-8, Copper(II) perchlorate
RL: PRP (Properties)
(mean spherical approximation study of osmotic and activity coeffs. for associating electrolytes in primitive model)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



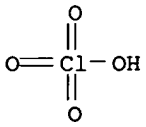
●1/2 Cu(II)

RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
IT 56-34-8, Tetraethylammonium chloride 64-20-0, Tetramethylammonium bromide 68-05-3, Tetraethylammonium iodide 71-91-0, Tetraethylammonium bromide 75-57-0, Tetramethylammonium chloride 75-58-1, Tetramethylammonium iodide 127-08-2, Potassium acetate 127-09-3, Sodium acetate 137-40-6, Sodium propionate 141-53-7, Sodium formate 333-20-0, Potassium thiocyanate 540-72-7, Sodium thiocyanate 546-89-4, Lithium acetate 631-40-3, Tetrapropylammonium iodide 1310-58-3, Potassium hydroxide, properties 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, properties 1314-64-3, Uranyl sulfate 1941-30-6, Tetrapropylammonium bromide **3251-23-8** 5810-42-4, Tetrapropylammonium chloride 6484-52-2, Ammonium nitrate, properties 7447-39-4, Copper(II) chloride, properties 7487-88-9, Magnesium sulfate, properties 7601-90-3, Perchloric acid, properties 7631-99-4, Sodium nitrate, properties 7632-00-0, Sodium nitrite 7646-85-7, Zinc(II) chloride, properties 7647-17-8, Cesium chloride, properties 7664-93-9, Sulfuric acid, properties 7697-37-2, Nitric acid, properties 7718-54-9, Nickel chloride, properties 7733-02-0, Zinc sulfate 7757-79-1, Potassium nitrate, properties 7757-82-6, Sodium sulfate, properties 7758-09-0, Potassium nitrite 7758-98-7, Copper(II) sulfate, properties 7761-88-8, Silver nitrate, properties 7778-18-9, Calcium sulfate 7778-80-5, Potassium sulfate, properties 7779-88-6, Zinc(II) nitrate 7783-20-2, Ammonium sulfate, properties 7785-87-7, Manganese(II) sulfate 7786-81-4, Nickel sulfate 7787-69-1, Cesium bromide 7789-17-5, Cesium iodide 7789-18-6, Cesium nitrate 7789-39-1, Rubidium bromide 7790-29-6, Rubidium iodide 7790-86-5, Cerium chloride 7790-98-9 7791-11-9, Rubidium chloride, properties 7791-26-6, Uranyl chloride 10022-31-8, Barium nitrate 10025-76-0, Europium chloride 10026-08-1, Thorium chloride 10042-76-9, Strontium nitrate 10099-58-8, Lanthanum chloride 10099-59-9, Lanthanum nitrate 10099-66-8, Lutetium trichloride 10102-06-4, Uranyl nitrate 10124-36-4, Cadmium sulfate 10124-37-5, Calcium nitrate 10377-48-7, Lithium sulfate 10377-60-3, Magnesium nitrate 12124-97-9, Ammonium bromide 12125-02-9, Ammonium chloride, properties 13126-12-0, Rubidium nitrate **13138-45-9**, Nickel nitrate 13510-49-1, Beryllium sulfate 13568-33-7, Lithium nitrite 13637-61-1, Zinc(II) perchlorate 13637-71-3, Nickel perchlorate **13770-18-8**, Copper(II)

perchlorate 13823-29-5, Thorium(IV) nitrate 14017-46-0, Lanthanum perchlorate 17194-00-2, Barium hydroxide
RL: PRP (Properties)
(mean spherical approximation study of osmotic and activity coeffs. for associating electrolytes in primitive model)
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 23 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:124027 HCAPLUS
DOCUMENT NUMBER: 128:221627
TITLE: Enhancement of antimicrobial peptide activity by metal ions
INVENTOR(S): Lawyer, Carl H.; Watabe, Kounosuke
PATENT ASSIGNEE(S): Southern Illinois University, USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

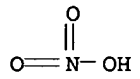
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9806419	A1	19980219	WO 1997-US14399	19970815
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2263164	AA	19980219	CA 1997-2263164	19970815
AU 9740699	A1	19980306	AU 1997-40699	19970815
AU 725954	B2	20001026		
EP 920327	A1	19990609	EP 1997-938344	19970815
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6042848	A	20000328	US 1997-911794	19970815
PRIORITY APPLN. INFO.:			US 1996-23983P P	19960815
			WO 1997-US14399 W	19970815

AB Provided are methods for maintaining or enhancing the antimicrobial activity of antimicrobial peptides, lytic peptides, and peptide-derived antibiotics by the use of metal ions. Also provided are pharmaceutical and other **compns.** comprising such peptides and/or at least one metal ion. Also provided are

therapeutic and other methods for controlling the growth of undesirable or pathogenic microorganisms in various loci or milieu in, on, or outside the body employing these peptides and metal ions. Also provided are kits comprising containers containing a peptide and a metal ion(s), resp.

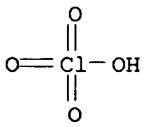
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enhancement of antimicrobial peptide activity by metal ions)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM A61K038-17
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): **1**

IT 71-00-1D, Histidine, copper chelate 142-71-2, Cupric acetate 527-09-3, Copper gluconate 540-16-9, Cupric butyrate 544-19-4, Cupric formate 598-54-9, Cuprous acetate 624-88-4, Cuprous formate 660-60-6, Cupric stearate 814-91-5, Cupric oxalate 815-82-7, Cupric tartrate 866-82-0, Cupric citrate 1120-44-1, Cupric oleate 1184-64-1, Cupric carbonate 1303-92-0, Cupric borate 1308-09-4, Cupric chromate 1317-38-0, Cupric oxide, biological studies 1317-39-1, Cuprous oxide, biological studies 1317-40-4, Cupric sulfide **3251-23-8**, Cupric nitrate 3251-29-4, Cuprous nitrate 3444-14-2 3687-47-6 7447-39-4, Cupric chloride, biological studies 7681-65-4, Cuprous iodide 7758-89-6, Cuprous chloride 7758-98-7, Cupric sulfate, biological studies 7787-70-4, Cuprous bromide 7789-45-9, Cupric bromide 7798-23-4, Cupric phosphate 10103-48-7, Copper phosphate 10402-29-6, Copper nitrate 11113-59-0, Copper fluoride 12125-21-2, Cuprous hydroxide 13097-41-1 13479-54-4, Cupric glycinate **13770-18-8**, Cupric perchlorate 14701-21-4, Silver ion, biological studies 14721-21-2, Cupric chlorate 15061-57-1, Cuprous perchlorate 15123-69-0, Cupric selenate 15158-11-9, biological studies 15488-81-0 15599-88-9 15721-63-8, Copper, ion (Cu3+), biological studies 16048-96-7, Cupric salicylate 16397-91-4, Manganese ion (Mn2+), biological studies 17493-86-6, Copper, ion (Cu1+), biological studies 20427-59-2, Cupric hydroxide 20563-00-2, Cuprous stearate 20681-14-5, biological studies 22205-45-4, Cuprous sulfide 22537-21-9, Boron ion (B3+),

biological studies 22537-23-1, Aluminum ion, biological studies 24203-36-9, Potassium ion, biological studies 37231-28-0, Melittin 41707-84-0, Cuprous salicylate 44042-21-9, Cuprous phosphate 50671-60-8, Cuprous butyrate 51827-01-1, Xenopsin 53421-36-6 54453-03-1 55068-79-6, Bombinin 57131-61-0 80802-79-5, Cecropin 103220-14-0, Defensin 113041-69-3, Magainin 114281-19-5, Levitide 116229-36-8, Bactenecin 119938-54-4, Sapecin 120668-29-3, Cryptdin 125543-62-6 134201-21-1 146345-75-7 148045-87-8, Tachyplesin 163663-18-1, Protegrin 172972-39-3, Copper borate oxide (Cu6(BO2)4O) 179264-81-4 204143-82-8, Azurcidin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enhancement of antimicrobial peptide activity by metal ions)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 24 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:277206 HCAPLUS
DOCUMENT NUMBER: 122:37851
TITLE: Process for removal of bases from waste gases or air.
INVENTOR(S): Shimada, Takashi; Okumura, Toshio; Hatakeyama, Toshiya
PATENT ASSIGNEE(S): Japan Pionics Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 624392	A1	19941117	EP 1994-106928	1994 0504
EP 624392 R: DE, FR, GB	B1	19980812		
JP 06319938	A2	19941122	JP 1993-132719	1993 0511
JP 06319939	A2	19941122	JP 1993-132720	1993 0511
US 5662872	A	19970902	US 1995-560171	1995 1117

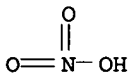
PRIORITY APPLN. INFO.:	JP 1993-132719	A	1993 0511
	JP 1993-132720	A	1993 0511
	US 1994-236343	B1	1994 0502

AB There is disclosed a process for **cleaning** a harmful gas which comprises bringing a gas containing a basic gas as a harmful component such as ammonia and amines into contact with a **cleaning** agent comprising a cupric salt supported on an inorg. carrier composed of an metallic oxide such as silica and

alumina or a metallic oxide **mixture** of cupric oxide and manganese dioxide to remove the harmful component from the gas containing a basic gas. According to the above process, it is made possible to effectively remove a basic gas such as ammonia and trimethylamine contained in the exhaust gas from semiconductor production process; and a harmful basic gas contained in dilution gas such as air or nitrogen which dils. the harmful gas suddenly leaked in emergency from a gas bomb filled inside with the harmful gas. Moreover, the process enables to prevent the occurrence of fire even in the coexistence of other gas such as silane, while maintaining excellent effect on the removal of the harmful gas.

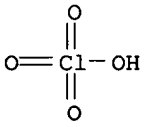
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate
RL: NUU (Other use, unclassified); USES (Uses)
(process for removal of bases from waste gases or air using cupric salts)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM B01D053-34
ICS B01D053-36; B01J020-06
CC 59-4 (**Air Pollution** and Industrial Hygiene)
IT 1313-13-9, Manganese dioxide, uses 1314-23-4, Zirconia, uses 1317-38-0, Cupric oxide, uses 1344-28-1, Alumina, uses **3251-23-8**, Cupric nitrate 7631-86-9, Silica, uses 7758-98-7, Cupric sulfate, uses 7798-23-4, Cupric phosphate 7803-62-5, Silane, uses 13463-67-7, Titania, uses **13770-18-8**, Cupric perchlorate 14721-21-2, Cupric chlorate 20255-20-3 36386-77-3, Cupric carbonate 39290-85-2, Cupric borate 55072-58-7, Silicic acid, copper(2+) salt 122202-26-0, Hypochlorous acid, copper(2+) salt
RL: NUU (Other use, unclassified); USES (Uses)
(process for removal of bases from waste gases or air using cupric salts)

L88 ANSWER 25 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:249698 HCAPLUS
DOCUMENT NUMBER: 122:303983
TITLE: Electrochemical formation of initial **composition** for superconductor synthesis in system Bi-Pb-Sr-Ca-Cu-O. I. A

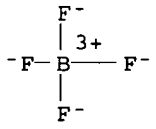
search for electrolytes for electrodeposition of Bi-Pb-Sr-Ca-Cu and Bi-Pb-Cu alloys

AUTHOR(S): Mochadskii, A. M.; Jankauskiene, R.-D. P.; Sharkis, A. A.; Juktonis, S. E.; Vengalis, B.
CORPORATE SOURCE: Institute Chemistry, Vilnius, 2006, Lithuania
SOURCE: Sverkhprovodimost: Fizika, Khimiya, Tekhnika (1993), 6(9-10), 1896-902
CODEN: SFKTE6; ISSN: 0131-5366
PUBLISHER: Institut Atomnoi Energii im. I. V. Kurchatova
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB An electrolyte **composition** is worked out for deposition of basic initial components used for high temperature superconductor synthesis in the Bi-Pb-Sr-Ca-Cu-O system with the atomic ratio of Bi:Pb:Cu = 1.8:0.2:3.

IT **38465-60-0**, Copper fluoroborate (Cu(BF4)2)
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrolyte; Bi Ca Cu Pb Sr oxide superconductors from alloy electrodeposition)

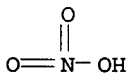
RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

IT **3251-23-8**, Cupric nitrate
RL: PRP (Properties)
(potentiometric curves of Pt electrode polarization in electrolyte solns.)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 76-4 (Electric Phenomena)
Section cross-reference(s): 57, 72

IT 13814-96-5, Lead fluoroborate (Pb(BF4)2) **38465-60-0**, Copper fluoroborate (Cu(BF4)2) 65991-46-0, Bismuth fluoroborate (Bi(BF4)3)
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrolyte; Bi Ca Cu Pb Sr oxide superconductors from alloy electrodeposition)

IT **3251-23-8**, Cupric nitrate 10042-76-9, Strontium nitrate 10099-74-8, Lead dinitrate 10124-37-5, Calcium nitrate 10361-44-1, Bismuth nitrate
RL: PRP (Properties)

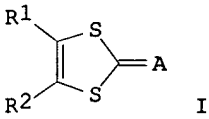
(potentiometric curves of Pt electrode polarization in electrolyte solns.)

L88 ANSWER 26 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:323557 HCAPLUS
DOCUMENT NUMBER: 120:323557
TITLE: Preparation of 2-(disubstituted methylene)-1,3-dithioles as liver disease treating agents
INVENTOR(S): Shibuya, Isao; Yonemoto, Katsumi; Yasumoto, Masahiko; Taguchi, Yoichi; Tsucha, Tooru; Mizuno, Masaki
PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05310730	A2	19931122	JP 1992-113962	19920407
JP 06084369	B4	19941026		

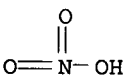
PRIORITY APPLN. INFO.: JP 1992-113962 19920407

OTHER SOURCE(S): CASREACT 120:323557; MARPAT 120:323557
GI



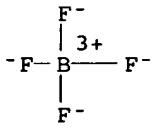
I

AB The title compds. I (A = CR3R4; R1, R2 = H, inert substituent; R3, R4 = electron-withdrawing group; R1R2 may be combined to form a ring), useful for liver disease treating agents (no data), are prepared by treating I (A = S) with CH2R3R4 in the presence of Ag salts and bases. A **mixture** of I (A = S, R1 = R2 = Ph) and Ag trifluoroacetate in MeCN was treated with MeO2CCH2CN and Et3N in hot bath for 2 h to give 58% I (A = C(CN)CO2Me).
IT **7761-88-8**, Silver nitrate, uses
RL: USES (Uses)
(in substitution of dithiolthiones with methylene compds.)
RN 7761-88-8 HCAPLUS
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

IT **14104-20-2**, Silver tetrafluoroborate
RL: RCT (Reactant); RACT (Reactant or reagent)
(in substitution of dithiolthiones with methylene compds.)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

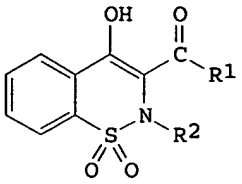
IC ICM C07D339-06
ICS B01J027-12; B01J027-25; B01J031-02; B01J031-04
ICA C07B061-00
CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): **1**
IT **7761-88-8**, Silver nitrate, uses
RL: USES (Uses)
(in substitution of dithiolthiones with methylene compds.)
IT 51-92-3 2966-50-9, Silver trifluoroacetate **14104-20-2**, Silver tetrafluoroborate
RL: RCT (Reactant); RACT (Reactant or reagent)
(in substitution of dithiolthiones with methylene compds.)

L88 ANSWER 27 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:603424 HCAPLUS
DOCUMENT NUMBER: 119:203424
TITLE: Method of preparing complexes of copper(II) with 1,2-benzothiazines, useful as antiinflammatories
INVENTOR(S): Mrozinski, Jerzy; Zborucki, Zygmunt; Janik, Maria; Wajcht, Jozef; Mozolowski, Felicjan
PATENT ASSIGNEE(S): Jeleniogorskie Zaklady Farmaceutyczne "Polfa", Pol.; Uniwersytet Wroclawski
SOURCE: Pol., 6 pp.
CODEN: POXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Polish
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 155110	B1	19911031	PL 1987-268015	1987 1001

PRIORITY APPLN. INFO.: PL 1987-268015 1987 1001

OTHER SOURCE(S): MARPAT 119:203424
GI

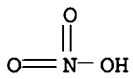


I

AB Complexes of Cu(II) with various oxicams I [R1 = OMe, OEt, 2-pyridylamino (Q), 5-methyl-3-isoxazolylamino; R2 = Me, Et] were prepared by reaction of 2 equiv I with 1 equiv Cu(II) salt in H2O and/or an organic solvent. For example, piroxicam in H2O was dissolved by treatment with 2% NaOH, and excess NaOH was neutralized with aqueous HCl (to pH 8). Aqueous CuCl2 was added, and the resulting precipitate was centrifuged and dried to give 80% Cu·2I·2H2O (R1 = Q, R2 = Me) (II). II showed antiinflammatory and analgesic activity in rats (no data), showed lower **toxicity** than piroxicam, and was nearly devoid of ulcerogenic effects. Six addnl. examples are described.

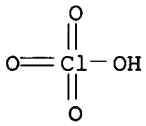
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate
RL: RCT (Reactant); RACT (Reactant or reagent)
(complexation of, with oxicam antiinflammatories)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C07D279-02
ICS C07D417-12
CC 28-14 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 78

IT **Toxicity**
(of copper complexes of oxicam antiinflammatories)

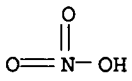
IT 142-71-2, Cupric acetate **3251-23-8**, Cupric nitrate 7447-39-4, Cupric chloride, reactions 7758-98-7, Cupric sulfate, reactions **13770-18-8**, Cupric perchlorate
RL: RCT (Reactant); RACT (Reactant or reagent)
(complexation of, with oxicam antiinflammatories)

L88 ANSWER 28 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:462350 HCAPLUS
DOCUMENT NUMBER: 117:62350
TITLE: Inhibition of HIV-1 proteinase by metal ions
AUTHOR(S): Woon, T. C.; Brinkworth, R. I.; Fairlie, D. P.
CORPORATE SOURCE: Cent. Drug Des. Dev., Univ. Queensland, 4072, Australia
SOURCE: International Journal of Biochemistry (1992), 24(6), 911-14
CODEN: IJBOBV; ISSN: 0020-711X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Certain metal ions have been identified as inhibitors (IC50 1-20 μM) of the aspartic proteinase of human immunodeficiency virus type 1 (HIV-PR). By contrast most simple metal ions do not inhibit this enzyme. Those that did inhibit have in common a high charge/size ratio or "hard" acidic nature, preferring to combine covalently with oxygen donor ligands. Some evidence from independent X-ray crystal structure detns. suggests that the metalloinhibitors identified here may bind in the active site of the enzyme via coordination to the carboxylate side chains of the essential active site residues Asp 25 and 125. Although the measured inhibition is only μM, very few enzyme-inhibitor interactions can be taking place and so more complex metalloinhibitors with ligands that can also bind to peptide side chains of the enzyme might be significantly more potent inhibitors of HIV-PR and of viral replication.

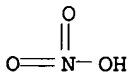
IT **10141-05-6 10421-48-4 13770-18-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiviral activity of, human immunodeficiency virus type 1 aspartic proteinase inhibition and electronic configuration in relation to)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



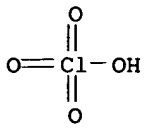
●1/2 Co(II)

RN 10421-48-4 HCAPLUS
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 1-5 (**Pharmacology**)
IT 814-80-2 1271-19-8 7647-10-1, Palladium chloride (PdCl2)
7718-54-9, Nickel chloride (NiCl2), biological studies 7733-02-0
7758-94-3, Iron chloride (FeCl2) 7803-55-6 10025-99-7
10099-74-8 10102-06-4 **10141-05-6 10421-48-4**
12027-67-7 12244-57-4 13721-39-6 13770-16-6
13770-18-8 15189-51-2 24419-56-5 27774-13-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiviral activity of, human immunodeficiency virus type 1 aspartic proteinase inhibition and electronic configuration in relation to)

L88 ANSWER 29 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:257840 HCAPLUS
DOCUMENT NUMBER: 116:257840
TITLE: Liquid membranes for separation of gaseous olefins from alkanes
INVENTOR(S): Blachman, Marc W.; Tsou, Dean T.
PATENT ASSIGNEE(S): Standard Oil Co., USA
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 458598	A2	19911127	EP 1991-304602	19910521
EP 458598	A3	19920311		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 2040798	AA	19911126	CA 1991-2040798	19910418
ZA 9103411	A	19920226	ZA 1991-3411	19910506
BR 9102047	A	19911224	BR 1991-2047	19910517
JP 04227823	A2	19920817	JP 1991-116332	19910521
CN 1056826	A	19911211	CN 1991-103420	19910524
RU 2045509	C1	19951010	RU 1991-4895488	19910524

US 5135547 A 19920804 US 1991-721909 1991 0620

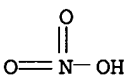
PRIORITY APPLN. INFO.: US 1990-528849 A 1990 0525

AB The title membranes comprise porous supports, aqueous solns of metal salts coordinating with olefins, and aliphatic carbonates as cosolvents. Thus, cellulose (mol. weight 6000-8000) disks were **impregnated** with a solution of MeOH, H2O, and 3N AgBF4 in 50% aqueous propylene carbonate (I) and precipitating in 50% aqueous I gave a liquid membrane with C2H4 and C2H6 permeability 2 + 10-7 and 3.0 + 10-10 mL-cm/cm2-5 cm Hg, resp.

IT **7761-88-8**, Silver nitrate, uses **14104-20-2**, Silver tetrafluoroborate
RL: USES (Uses)
(in liquid membranes for separating gaseous olefins and alkanes)

RN 7761-88-8 HCAPLUS

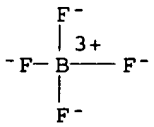
CN Nitric acid silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS

CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IC ICM B01D061-38
ICS B01D053-22; C07C007-144

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

IT Ceramic materials and **wares**
Glass, oxide
Metals, preparation
Polyamides, uses
Polycarbonates, uses
Polyimides, uses
Polysulfones, uses
RL: USES (Uses)
(supports, for liquid membranes for olefin-alkane separation)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate **7761-88-8**, Silver nitrate, uses 7775-41-9, Silver fluoride **14104-20-2**, Silver tetrafluoroborate
RL: USES (Uses)
(in liquid membranes for separating gaseous olefins and alkanes)

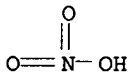
L88 ANSWER 30 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:56778 HCAPLUS
DOCUMENT NUMBER: 112:56778
TITLE: Mechanistic studies of the oxidative-coupling polymerization of 2,6-dimethylphenol. Part V. Effect of different copper counter-ions on the structure of the copper complex, its catalytic activity and specificity for polymer formation
AUTHOR(S): Viersen, F. J.; Challa, G.; Reedijk, J.
CORPORATE SOURCE: Lab. Polym. Chem., Univ. Groningen, Groningen, 9747 AG, Neth.
SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1989), 108(7-8), 247-55
CODEN: RTCPA3; ISSN: 0165-0513
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In studying the mechanism of the oxidation coupling polymerization of 2,6-dimethylphenol, the effect of the Cu counter-ion was also investigated. This polymerization is catalyzed by Cu(II)-amine complexes. The counter-ions were divided into strongly coordinating (Cl- and Br-), weakly coordinating (NO3-), and noncoordinating counter-ions (ClO4-, CF3SO3- and BF4-). The active catalyst, or its precursor, is the chloro-bridged, or bromo-bridged, dinuclear copper complex with hydroxide acting as a co-catalyst required for the formation of strongly coordinating phenolate anions. Although large differences in reactivity were observed, the product **composition**, i.e., the fraction of polymer and diphenoquinone side-product, was not affected by the counter-ion used.

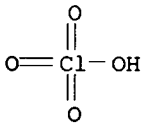
IT **3251-23-8**, Copper dinitrate **13770-18-8**, Copper diperchlorate **34946-82-2**, Copper ditriflate **38465-60-0**
RL: CAT (Catalyst use); USES (Uses)
(catalyst, containing tetramethylethylenediamine, for polymerization of dimethylphenol, mechanism in relation to)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



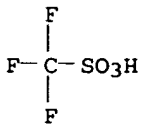
●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



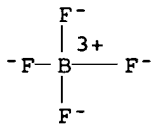
●1/2 Cu(II)

RN 34946-82-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, copper(2+) salt (9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

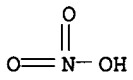
CC 35-3 (Chemistry of Synthetic High Polymers)
IT **3251-23-8**, Copper dinitrate 7447-39-4, Copper dichloride, uses and miscellaneous 7789-45-9, Copper dibromide **13770-18-8**, Copper diperchlorate **34946-82-2**, Copper ditriflate **38465-60-0**
RL: CAT (Catalyst use); USES (Uses)
(catalyst, containing tetramethylethylenediamine, for polymerization of dimethylphenol, mechanism in relation to)

L88 ANSWER 31 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:525906 HCAPLUS
DOCUMENT NUMBER: 111:125906
TITLE: Atom formation function in electrothermal atomic absorption spectrometry and its application to analytical chemistry. VI. Effects of anions, acids, alkali and alkaline earth salts and determination of some metals in biological samples under chemical interference-free conditions
AUTHOR(S): Nakamura, Susumu; Kubota, Masaaki
CORPORATE SOURCE: Natl. Chem. Lab. Ind., Tskuba, Japan
SOURCE: Kagaku Gijutsu Kenkyusho Hokoku (1988), 83(6), 263-72
CODEN: KGKHEP; ISSN: 0388-3213
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Matrix interferences in electrothermal atomic absorption spectrometry were evaluated by the atom formation model function given in the authors' previous paper. Activation energies calculated from the absorbance signal using the function reveal the chemical state of an analyte at its atomization stage; i.e., whether a chemical bond exists between the analyte and concomitants or not. With Cu sulfate, nitrate, perchlorate and chloride, signals of Cu were the same as those obtained with Cu metal. However, the signals changed when adding H2SO4, HNO3, HClO4, and HCl. Similarly, Fe signals showed interference with H2SO4 and HCl but not with Fe salts. The activation energies obtained with Cu and Fe metals agreed with those obtained by the addition of the acids within the

precision of the measurement. This demonstrates that acid interferences are not due to combination of analyte with matrixes. To clarify whether the effects of alkali and alkaline earth salts are due to chemical interference or not, activation energies of the analytes were calculated from signals and furnace temps. using the atom formation equation. In the case of Cu, the coexistence of nitrates and/or perchlorates of alkali and alkaline earth elements is thought to cause chemical interference, because these salts decrease the activation energies as well as the signal of the analyte. No remarkable chemical interference occurs with alkali and alkaline earth sulfates and/or chlorides. This suggests that the interference is not caused by chemical bonding between the analytes and the alkali and alkaline earth elements but between the analytes and the anion which sep. from the alkali and alkaline earth elements at high temps. Thermal gravimetric plots are given for some of the Cu and Fe salts as well as for the acids. A fast response system was applied to the determination of Cu, Fe, Cd and Zn in biol. samples. Based on the atom formation model function, activation energies of these elements at the atomization stage were measured to ascertain chemical interferences and select interference-free anal. conditions. Activation energies obtained for Cu, Fe and Zn metal in the absence of a matrix were in agreement with those obtained for these metals contained in NBS biol. standard reference materials. Also, anal. values agreed well with the certified ones within the precision of the present method. These results demonstrate that chemical interferences are negligibly small under the anal. conditions selected.

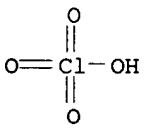
IT **3251-23-8**, Cupric nitrate **13770-18-8**, Cupric perchlorate
RL: AMX (Analytical matrix); ANST (Analytical study)
(copper determination in, by electrothermal atomic absorption spectrometry, matrix effect in)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

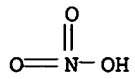
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IT **10421-48-4**, Ferric nitrate
RL: AMX (Analytical matrix); ANST (Analytical study)
(iron determination in, by electrothermal atomic absorption spectrometry, matrix effect in)

RN 10421-48-4 HCAPLUS
CN Nitric acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Fe(III)

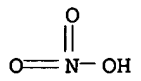
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 9
IT Liver, **composition**
Plant analysis
(transition metal determination in, by electrothermal atomic absorption spectrometry under chemical interference-free conditions)
IT **3251-23-8**, Cupric nitrate 7447-39-4, Cupric chloride, analysis 7758-98-7, Cupric sulfate, analysis **13770-18-8**, Cupric perchlorate
RL: AMX (Analytical matrix); ANST (Analytical study)
(copper determination in, by electrothermal atomic absorption spectrometry, matrix effect in)
IT 7705-08-0, Ferric chloride, analysis 10028-22-5, Ferric sulfate **10421-48-4**, Ferric nitrate 13537-24-1, Ferric perchlorate
RL: AMX (Analytical matrix); ANST (Analytical study)
(iron determination in, by electrothermal atomic absorption spectrometry, matrix effect in)

L88 ANSWER 32 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:83135 HCAPLUS
DOCUMENT NUMBER: 108:83135
TITLE: The dynamics of water molecules in ionic solution: II. Quasi-elastic neutron scattering and tracer diffusion studies of the proton and ion dynamics in concentrated nickel(2+), copper(2+) and neodymium(3+) aqueous solutions
AUTHOR(S): Salmon, P. S.; Howells, W. S.; Mills, R.
CORPORATE SOURCE: H. H. Wills Phys. Lab., Univ. Bristol, Bristol, BS8 1TL, UK
SOURCE: Journal of Physics C: Solid State Physics (1987), 20(34), 5727-47
CODEN: JPSOAW; ISSN: 0022-3719
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The technique of high-resolution incoherent quasi-elastic neutron scattering (QENS) is used to measure the translational diffusive motion of H2O protons in concentrated NiX2, CuX2, and NdX3 aqueous solns. in which X = Cl-, ClO4-, and/or NO3-. The technique of tracer diffusion is also used in order to measure the cation self-diffusion coefficient in concentrated NiX2 and CuX2 aqueous solns. in which X = Cl- and ClO4-. At room temperature (.simeq.25°), the cation-water proton binding times are described by the limits τ1(Ni2+) .gtorsim.5 + 10-9 s, τ1(Cu2+) .ltorsim.10-10 s, and τ1(Nd3+) > 10-10 s and that for the Ni2+ solns., which are in slow exchange, the diffusion coefficient of protons bound to the cation is measurable by using the QENS method. A 2-state model for slow exchange in which those water mols. not bound to the cation are in bulk water does not account for the observed proton diffusion in any of the solns. It is shown, however, that for Ni2+ solns. the proton dynamics can be described by specifying 2 addnl. environments which are identified with H2O in the second shell of the cation and H2O associated with the anions. In NiCl2 solns. this model does not give rise to a second-shell

diffusion coefficient which is greater than that for **pure** H2O.

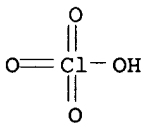
IT **13138-45-9**, Nickel dinitrate **13770-18-8**, Copper diperchlorate
RL: PRP (Properties)
(diffusion and liquid structure in concentrated aqueous, neutron scattering study of)

RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
IT 7447-39-4, Cupric chloride, properties 7718-54-9, Nickel dichloride, properties 10024-93-8, Neodymium trichloride **13138-45-9**, Nickel dinitrate 13637-71-3, Nickel diperchlorate **13770-18-8**, Copper diperchlorate
RL: PRP (Properties)
(diffusion and liquid structure in concentrated aqueous, neutron scattering study of)

L88 ANSWER 33 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:575404 HCAPLUS
DOCUMENT NUMBER: 105:175404
TITLE: Eutectic microknit **composite explosives**
INVENTOR(S): Jessop, Harvey A.; Abegg, M. Taylor; Peterson, John A.; Butler, Jay W.; McCormick, Ronald F.; Lavery, Ormond F.
PATENT ASSIGNEE(S): Megabar Explosives Corp., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

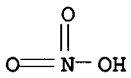
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4600452	A	19860715	US 1984-578179	1984 0208

PRIORITY APPLN. INFO.: US 1984-578179
1984
0208

AB Solid, NH_4NO_3-based eutectic microcryst. (microknit) **explosives**, propellants or gas generators comprising essentially anhydrous **mixts.** of NH_4NO_3, soluble **explosives**, surfactants, hydrocarbon fuels, additives, and other non-nitrate oxidizer salts are made by 3 methods involving intimate **mixing** or dissoln. of the components in the molten state to a fluid in which the molten salts can be supercooled before onset of crystal nucleation and reversion from the fluid state. The 1st method involves only **mixing**, dissoln., and supercooling. The 2nd and 3rd methods include unstable, oil-continuous and salt-continuous emulsions, resp. Thus, an **explosive** prepared by dissolving ethylenediamine mononitrate monoperchlorate 40.0, sorbitan monooleate 4.0, hexylamine nitrate 2.0, and modified guar 2.0 weight% in a molten **mixture** of NH_4NO_3 44.0 and KNO_3 8.0 weight% had a d. 1.5 g/cm3 in 6.3-cm-diameter cartridges and was detonated by a 15 g booster.

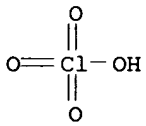
IT **3251-23-8 13770-18-8**
RL: USES (Uses)
(**explosives** and propellants and gas generators, ammonium nitrate eutectic crystalline **composites**)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C06B045-10
INCL 149019300
CC 50-2 (Propellants and Explosives)
ST nitrate eutectic microcryst **explosive** propellant; microknit eutectic **composite explosive**

IT Naphtha
RL: USES (Uses)
(coal-tar, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)

IT Perlite
RL: USES (Uses)
(d.-control and sensitizing agents, in ammonium nitrate eutectic microcryst. **composite explosives**

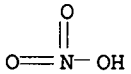
and propellants and gas generators)
IT Polyacetylenes
Polyesters, uses and miscellaneous
Polyethers
Polysulfides
RL: USES (Uses)
(fuels, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT Gases
(generation of, ammonium nitrate microcryst. eutectic **compns.** for)
IT Hydrocarbon oils
RL: USES (Uses)
(in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT Perfluorocarbons
RL: USES (Uses)
(poly-, fuels, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT Alkanes, polymers
Phenols, polymers
RL: USES (Uses)
(polymers, fuels, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT **Explosives**
Propellants
(**composite**, ammonium nitrate microcryst. eutectic)
IT Amines, uses and miscellaneous
RL: USES (Uses)
(hydrogenated tallow alkyl, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT Alkenes, uses and miscellaneous
Amines, uses and miscellaneous
RL: USES (Uses)
(poly-, fuels, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT 27178-87-6
RL: USES (Uses)
(crystal habit modifiers, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT 7757-79-1P, preparation 7778-74-7P 7779-88-6P 7790-69-4P
7790-98-9P **3251-23-8** 10099-74-8 10377-66-9
13637-61-1 13637-76-8 13770-16-6 **13770-18-8**
RL: PREP (Preparation)
(**explosives** and propellants and gas generators, ammonium nitrate eutectic crystalline **composites**)
IT 6484-52-2P, preparation
RL: PREP (Preparation)
(**explosives** and propellants and gas generators, eutectic microcryst. **composite**)
IT 9003-53-6
RL: USES (Uses)
(fuels, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)
IT 60676-86-0
RL: USES (Uses)
(fume, d.-control and sensitizing agent, in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)

IT 1338-43-8 3414-89-9 9000-30-0 14999-73-6 20829-66-7
24979-97-3 25155-30-0 37836-27-4 99661-21-9 99684-85-2
RL: USES (Uses)
(in ammonium nitrate eutectic microcryst. **composite explosives** and propellants and gas generators)

L88 ANSWER 34 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:151889 HCAPLUS
DOCUMENT NUMBER: 104:151889
TITLE: Soft **composite explosives**
INVENTOR(S): Abegg, M. Taylor; Peterson, John A.; Jessop, Harvey A.
PATENT ASSIGNEE(S): Megabar Explosives Corp., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

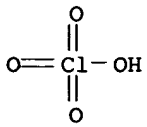
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4552597	A	19851112	US 1984-641687	1984 0817
PRIORITY APPLN. INFO.:			US 1984-641687	1984 0817

OTHER SOURCE(S): MARPAT 104:151889
AB Essentially anhydrous, soft grease-like, stable, **composite explosives** with ≤3 weight% moisture and O balance +5 to -50% are prepared as melt-in-fuel emulsions in which the discontinuous phase is a eutectic **mixture** comprising NH_4NO_3, ≥1 oxidizer salts, and ≥1 soluble compds. and the continuous phase is an emulsifier-fuel **mixture** and comprises <2.5 weight% of the **composition** Thus, a **compn** . consisting of NH_4NO_3 67.0, KNO_3 14.0, $KClO_4$ 5.0, glycerin 10.0, sorbitan monooleate 0.4, oleylamine linoleate 0.4, mineral oil 1.2, and microspheres 2.0 weight% had grease-like consistency at 20°, d. 1.25 g/cm3, and was detonated in 3.8 cm sizes.
IT **3251-23-8 13770-18-8**
RL: USES (Uses)
(oxidizers, in ammonium nitrate grease-like emulsion **explosives**)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IC ICM C06B045-00
INCL 149002000
CC 50-2 (Propellants and Explosives)
ST ammonium nitrate grease like **explosive**
IT **Explosives**
(emulsion-melt-in-fuel, ammonium nitrate-based grease-like)
IT Hydrocarbon oils
Perlite
RL: USES (Uses)
(**explosives** containing, in grease-like ammonium nitrate-based emulsion)
IT Emulsions
(melt-in-fuel **explosive**, ammonium nitrate-based, grease-like)
IT Spheres
(micro-, **explosives**, grease-like ammonium nitrate-based emulsion)
IT 56-81-5, uses and miscellaneous 151-21-3, uses and miscellaneous
1338-43-8 3414-89-9 7757-79-1, uses and miscellaneous
7778-74-7 7790-98-9 18423-20-6 20256-00-2 20748-72-5
20829-66-7 38482-52-9 101559-65-3 101559-66-4
RL: USES (Uses)
(**explosives**, grease-like ammonium nitrate-based emulsion)
IT 6484-52-2, uses and miscellaneous
RL: USES (Uses)
(**explosives**, melt-in-fuel emulsion, grease-like)
IT 7631-86-9, uses and miscellaneous
RL: USES (Uses)
(fume, in ammonium nitrate grease-like emulsion **explosives**)
IT **3251-23-8** 7779-88-6 10099-74-8 10377-66-9
13637-61-1 13637-76-8 13770-16-6 **13770-18-8**
RL: USES (Uses)
(oxidizers, in ammonium nitrate grease-like emulsion **explosives**)

L88 ANSWER 35 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:97818 HCAPLUS
DOCUMENT NUMBER: 92:97818
TITLE: Corrosion-retarding **composition**
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: Neth. Appl., 33 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

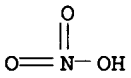
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 7712284	A	19790510	NL 1977-12284	1977

PRIORITY APPLN. INFO.: NL 1977-12284 A 1977 1108 1108

AB A corrosion-retarding **composition** for ferrous metals contains an alkanolamine, CuS or a Cu salt, and a source of S atoms, such as H2S, S, or COS in combination with an oxidant. In acid-gas scrubbing adsorption solns., S is set free, partly as polysulfide. Optionally, the alkanolamine is RR1NCR22CR22OH (R and R1 = H or CR22CR22OH; R2 = H or C1-3 alkyl). Thus, AISI 1010 [12725-33-6] steel had an inhibition efficiency of 96% in aqueous 80% monoethanolamine [141-43-5] saturated with H2S at room temperature and containing CuS and KMnO4 each 1000 ppm.

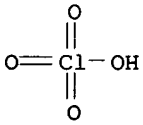
IT **3251-23-8 13770-18-8 38465-60-0**
RL: USES (Uses)
(alkanolamine corrosion inhibitors containing, for steel in gas scrubbers)

RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



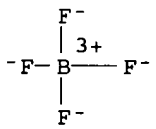
●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

IC C23F011-08
CC 55-9 (Ferrous Metals and Alloys)
IT 142-71-2 533-01-7 584-08-7 660-60-6 814-91-5 1308-09-4
1313-60-6 1317-39-1, uses and miscellaneous 1317-40-4

3251-23-8 7447-39-4, uses and miscellaneous 7553-56-2, uses and miscellaneous 7631-90-5 7681-11-0, uses and miscellaneous 7704-34-9, uses and miscellaneous 7722-64-7 7722-84-1, uses and miscellaneous 7726-95-6, uses and miscellaneous 7727-21-1 7727-54-0 7758-05-6 7775-09-9 7789-38-0 7789-45-9 7789-80-2 7790-21-8 7790-28-5 10118-76-0 10588-01-9 11138-47-9 12134-35-9 13444-71-8 13587-35-4 13767-34-5 13767-71-0 **13770-18-8** 14220-26-9 14446-13-0 15061-57-1 16712-25-7 22205-45-4 23414-72-4 36386-77-3 **38465-60-0**
RL: USES (Uses)
(alkanolamine corrosion inhibitors containing, for steel in gas scrubbers)

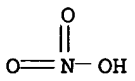
L88 ANSWER 36 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1979:190718 HCAPLUS
DOCUMENT NUMBER: 90:190718
TITLE: **Composition** for inhibiting the corrosion of ferrous metals
INVENTOR(S): Asperger, Robert G.; Krawczyk, Leroy S.; Oakes, Billy D.
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4143119	A	19790306	US 1977-807089	19770616
CA 1080956	A1	19800708	CA 1977-289921	19771031

PRIORITY APPLN. INFO.: US 1976-648620 A2 19760112
US 1977-807089 A 19770616

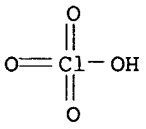
AB Cu-containing corrosion inhibitors are used for steels in contact with acid gases, such as H2S, CO2, and COS, in acid gas removal from sour gas. Cu or Cu compds. and S or S compds. are maintained in solution, such as Cu sulfide dissolved in aqueous alkanolamine or monoethanolamine [141-43-5] solution used for acid gas removal from natural or synthetic gases. The absorbents for acid-gas stripping are RR1NC2R42OH (R, R1 H or CR23CR22OH; R2H or C1-3 alkyl) alone or in combination with sulfolane [126-33-0], K2CO3, or diglycolamines. The preferred absorbents when only CO2 is present are monoethanolamine, diisopropanolamine [110-97-4] with sulfolane, diethanolamine [111-42-2], diglycolamine [533-01-7], and Methicol [623-57-4] in aqueous solns. Oxidizing agents, such as S, KMnO4, NaMnO4, Ca(MnO4)2, Sr(MnO4)2, Zn(MnO4)2, K or Na persulfate, KIO3, Ca(IO3)2, NaBrO3, Na2Cr2O7, K2Cr2O7, O, H2O2, and Na2O2 to produce S from H2S dissolved in the absorbent. Thus, AISI 1010 [12725-33-6] coupon was immersed in aqueous 80% monoethanolamine solution saturated with H2S at room temperature and used for stripping acid gases at 120° from the absorbent for 15 h and had an inhibition efficiency of 96% when CuS and KMnO4 each 1000 ppm were added.

IT **3251-23-8 13770-18-8 38465-60-0**
RL: USES (Uses)
(corrosion inhibition of steels in solution containing, in acid gas stripping from natural and synthetic fuel gases)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



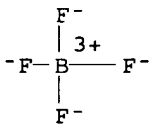
●1/2 Cu(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) $^{2+}$

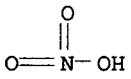
IC B01D053-34
INCL 423226000
CC 55-9 (Ferrous Metals and Alloys)
Section cross-reference(s): 51
IT 142-71-2 533-01-7 598-54-9 1303-92-0 1308-09-4
1317-38-0, uses and miscellaneous 1317-40-4 **3251-23-8**
7057-72-9 7447-39-4, uses and miscellaneous 7617-31-4
7758-98-7, uses and miscellaneous 7789-45-9 12643-19-5
12771-00-5 13395-16-9 13767-34-5 13767-71-0
13770-18-8 16712-25-7 22205-45-4 36386-77-3
38465-60-0 40974-00-3 70283-75-9
RL: USES (Uses)
(corrosion inhibition of steels in solution containing, in acid gas stripping from natural and synthetic fuel gases)

L88 ANSWER 37 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:519686 HCAPLUS
DOCUMENT NUMBER: 89:119686

TITLE: An electrochemical study of copper(II) nitrate and perchlorate in N,N-dimethylformamide
AUTHOR(S): Braun, Robert D.
CORPORATE SOURCE: Dep. Chem., Univ. Southwestern Louisiana, Lafayette, LA, USA
SOURCE: Analytica Chimica Acta (1978), 99(2), 325-31
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English

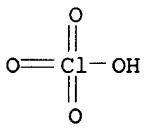
AB Polarog., cyclic voltammetric and controlled-potential coulometric studies of Cu(II) nitrate and perchlorate in DMF are reported. Cu(II) in perchlorate solns. is directly reduced in a 2-electron step to Cu metal at Pt electrodes and to a Cu amalgam at Hg electrodes. Cu(II) in the presence of nitrate forms a complex of **composition** Cu(NO3)2 in DMF; the dissociation constant, measured polarog., is 9 + 10-5. The Cu(II) nitrate complex is electrochem. reduced in 2 steps consisting of a reversible dissociation of the complex followed by direct reduction of Cu(II) ion to Cu. The diffusion coeffs. of Cu(II) ion and the Cu(II) nitrate complex are 4.91 + 10-6 cm2 s-1 and 4.33 + 10-6 cm2 s-1, resp.

IT **3251-23-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum in DMF, concentration in relation to)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IT **13770-18-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum, in DMF)
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 72-11 (Electrochemistry)
IT **3251-23-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum in DMF, concentration in relation to)
IT **13770-18-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., on mercury and platinum, in DMF)

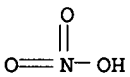
L88 ANSWER 38 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:480997 HCAPLUS
DOCUMENT NUMBER: 89:80997
TITLE: Ion solvation and ion association in electrolyte-containing solvent **mixtures**
AUTHOR(S): Decker, Ulrich; Hahn, Rainer; Rudakoff, Georg
CORPORATE SOURCE: Sekt. Verfahrenschem., Tech. Hochsch. "Carl Schorlemmer", Leuna-Merseberg, Ger. Dem. Rep.
SOURCE: Zeitschrift fuer Physikalische Chemie (Leipzig) (1978), 259(3), 497-512
CODEN: ZPCLAH; ISSN: 0372-9680
DOCUMENT TYPE: Journal
LANGUAGE: German

AB Changes in extinction coeffs., elec. conductivity, viscosity, Walden product, excess volume, and NMR shifts were used to calculate ion association and solvation equilibrium consts. for various salts (LiCl, CuCl2, Ni(NO3)2, Co(NO3)2, CoCl2, NiCl2, Cu(ClO4)2, NiSO4, CuSO4, NaCl, KCl, LiBr, KBr, NaBr, NaI, KI) in aqueous EtOH or aqueous Me2CO.

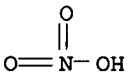
IT **10141-05-6 13138-45-9 13770-18-8**
RL: PRP (Properties)
(ion association and solvation equilibrium of, in aqueous acetone)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



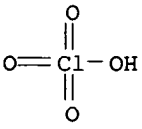
●1/2 Co(II)

RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Ni(II)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 68-4 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
IT 7646-79-9, properties 7718-54-9, properties 7758-98-7, properties 7786-81-4 **10141-05-6 13138-45-9 13770-18-8**

RL: PRP (Properties)
(ion association and solvation equilibrium of, in aqueous acetone)

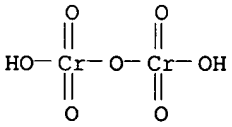
L88 ANSWER 39 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:31280 HCAPLUS
DOCUMENT NUMBER: 68:31280
TITLE: Wood **preservatives**
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
SOURCE: Brit., 6 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1091998		19671122	GB	
DE 1492509			DE	
FR 1496647			FR	
PRIORITY APPLN. INFO.:			DE	1965 1015
			DE	1966 0407

AB A **preservative** having high effectiveness, low corrosive action, and desirably slow fixation in the wood contains as active ingredients Cu and (or) Zn compds., a complex fluoride, and a compound of Cr(VI) with an atomic ratio of Cr(VI) to F ≥3:6. Preferred **composition** ranges are 6-15% Cu and (or) Zn, 10-20% F, and 20-30% Cr(VI), with Cr(VI)-F = 4-5:6. In an example, a formulation containing 44.0% CuSiF6.6H2O and 56.0% CrO3 gave a weight loss of 0.8-15.6 g./sq. m. on Fe in a 15-day corrosion cycle in concns. of 2-20%. When pine sapwood is fully impregnated with a 4% solution, 40% of the Cu and 50% of the F are leached according to DIN Standard 52176. Threshold retention of the **preservative**, after leaching, against Basidiomycetes is 6 kg./m.3, against dry-rot fungi 11 kg./m.3

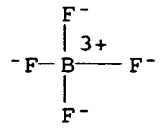
IT **7789-09-5 38465-60-0**
RL: USES (Uses)
(as **preservative**, for wood)

RN 7789-09-5 HCAPLUS
CN Chromic acid (H2Cr2O7), diammonium salt (9CI) (CA INDEX NAME)



●2 NH_3

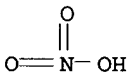
RN 38465-60-0 HCAPLUS
CN Borate(1-), tetrafluoro-, copper(2+) (2:1) (9CI) (CA INDEX NAME)



●1/2 Cu(II) 2+

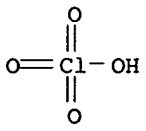
IC A01N
CC 43 (Cellulose, Lignin, Paper, and Other Wood Products)
ST DRY ROT **PRESERVATIVES**; FUNGICIDES WOOD; WOOD **PRESERVATIVES**; COPPER WOOD **PRESERVATIVES**; ZINC WOOD **PRESERVATIVES**; **PRESERVATIVES** WOOD
IT Wood **preservatives**
(fluorine-containing inorg. salts as)
IT 1308-38-9, uses and miscellaneous 1317-38-0, uses and miscellaneous 1341-49-7 7758-99-8 **7789-09-5** 12021-69-1 16949-65-8 18433-42-6 18972-56-0 26062-07-7 **38465-60-0**
RL: USES (Uses)
(as **preservative**, for wood)

L88 ANSWER 40 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:25267 HCAPLUS
DOCUMENT NUMBER: 68:25267
TITLE: Copper(II) cyanate complexes in aceton
AUTHOR(S): Valtr, Zdenek; Quastlerova, M.
CORPORATE SOURCE: Tech. Univ., Bratislava, Czech.
SOURCE: Zeitschrift fuer Chemie (1966), 6(9), 348
CODEN: ZECEAL; ISSN: 0044-2402
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The absorption spectra of a mixture of CuCl2, Cu(NO3)2, or Cu(ClO4)2 and an increasing amount of LiOCN were measured to study the formation of Cu(II) cyanato complexes in Me2CO. The dependence of the absorption on the **composition** of the isomolar solns. (Job's curve) for the system CuCl2-LiOCN-Me2CO shows an absorption maximum at 475 mμ and the formation of the complex with the mole ratio Cu2+:OCN- = 1:1.5.
IT **3251-23-8 13770-18-8**
RL: PRP (Properties)
(spectrum (visible and uv) of lithium cyanate mixts. with, complex formation in relation to)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

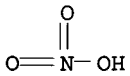
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

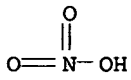
CC 73 (Spectra and Other Optical Properties)
IT **3251-23-8** 7447-39-4, properties **13770-18-8**
RL: PRP (Properties)
(spectrum (visible and uv) of lithium cyanate mixts. with, complex formation in relation to)

L88 ANSWER 41 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1964:401324 HCAPLUS
DOCUMENT NUMBER: 61:1324
ORIGINAL REFERENCE NO.: 61:194g-h
TITLE: A Raman spectrophotometric comparison of interionic association in aqueous solutions of metal nitrates, sulfates, and perchlorates
AUTHOR(S): Hester, R. E.; Plane, R. A.
CORPORATE SOURCE: Cornell Univ., Ithaca, NY
SOURCE: Inorg. Chem. (1964), 3(5), 769-70
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB In a general study of metal oxyanion assocns. in aqueous solns., Raman spectra of near-saturated aqueous solns. of metal nitrates, sulfates, and perchlorates showed that complexes were more usual for nitrates than sulfates, and were not observed for perchlorates. Except for In, complexes of sulfates were solvent separated New frequencies arising from complexes of nitrates were given a C2υ point assignment. The order of dissymmetry in nitrates was Th4+ > In3+ > Cu2+ > Hg2+ > Ce3+ > Ca2+ > Zn2+, Al3+, Ag+ > Na+, K+, NH4+. Detns. of M intensities of the ν1(A1) lines for sulfate and perchlorate ions indicated spectral constancy. The latter ion was endorsed for use as an internal standard for Raman line intensity measurements under usual aqueous conditions.
IT **3251-23-8**, Copper nitrate, Cu(NO3)2 **10108-73-3**, Cerium nitrate, Ce(NO3)3 **13770-18-8**, Copper perchlorate, Cu(ClO4)2
(spectrum (Raman) of, interionic association and)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



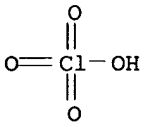
●1/2 Cu(II)

RN 10108-73-3 HCAPLUS
CN Nitric acid, cerium(3+) salt (8CI, 9CI) (CA INDEX NAME)



●1/3 Ce(III)

RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



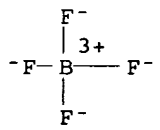
●1/2 Cu(II)

CC 10 (Spectra and Some Other Optical Properties)
IT **3251-23-8**, Copper nitrate, Cu(NO3)2 6484-52-2, Ammonium nitrate 7446-18-6, Thallium sulfate, Tl2SO4 7487-88-9, Magnesium sulfate 7601-89-0, Sodium perchlorate 7601-90-3, Perchloric acid 7616-83-3, Mercury perchlorate, Hg(ClO4)2 7733-02-0, Zinc sulfate 7757-79-1, Potassium nitrate 7757-82-6, Sodium sulfate, Na2SO4 7758-98-7, Copper sulfate 7761-88-8, Silver nitrate 7779-88-6, Zinc nitrate 7783-20-2, Ammonium sulfate 7783-93-9, Silver perchlorate, AgClO4 7791-03-9, Lithium perchlorate 10043-01-3, Aluminum sulfate 10045-94-0, Mercury nitrate, Hg(NO3)2 **10108-73-3**, Cerium nitrate, Ce(NO3)3 10124-36-4, Cadmium sulfate 10124-37-5, Calcium nitrate 13464-82-9, Indium sulfate, In2(SO4)3 13473-90-0, Aluminum nitrate 13477-36-6, Calcium perchlorate 13529-74-3, Indium perchlorate, In(ClO4)3 13597-95-0, Beryllium perchlorate 13637-76-8, Lead perchlorate, Pb(ClO4)2 **13770-18-8**, Copper perchlorate, Cu(ClO4)2 13770-61-1, Indium nitrate, In(NO3)3 13823-29-5, Thorium nitrate, Th(NO3)4 14017-46-0, Lanthanum perchlorate, La(ClO4)3 14017-47-1, Cerium perchlorate, Ce(ClO4)3 14452-39-2, Aluminum perchlorate 16045-17-3, Thorium perchlorate, Th(ClO4)4 34781-33-4, Gallium sulfate
(spectrum (Raman) of, interionic association and)
IT 10034-81-8, Magnesium perchlorate
(tetrafluoroethylene polymer molding **compns.**)

L88 ANSWER 42 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1963:447430 HCAPLUS
DOCUMENT NUMBER: 59:47430
ORIGINAL REFERENCE NO.: 59:8514a-c
TITLE: Isolation of monoolefins by means of metallic salt solutions
AUTHOR(S): Krekeler, Hans W.; Hirschbeck, Josef M.; Schwenk, Ulrich
CORPORATE SOURCE: Farbwerke Hoechst A.-G., Frankfurt a.M.-Hoechst, Germany
SOURCE: Erdoel und Kohle (1963), 16(6-I), 551-60
CODEN: ERKOAJ; ISSN: 0367-1305
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Recent developments by Farbwerke Hoechst in the recovery of

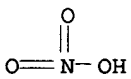
monoolefins, especially C2H4 and C3H6, by using Cu+ complex and Ag+ solns. are reviewed. The reversible absorption of olefins increases with their partial pressure and with increasing concentration of the metal salt up to a limiting value. For Cu+, the best anion is NO3 and the best complex components are morpholine, HOCH(Me)CH2NH2, or HOC2H4NH2. The best anion for Ag+ is excess BF4-, which is better than ClO4-. Cu+ solns. have a lower olefin capacity than Ag+ solns. because they give lower metal concns. They absorb olefins in different amts., e.g. more C2H4 than C3H6, but Ag+ salts absorb all olefins at the same high rate. CO is strongly absorbed by Cu+ solns., while Ag+ solns. do so only slightly. Experiences in recovery of olefins from both exptl. and production plants are given with respect to concns., viscosities, and stabilities of the absorbing solns., problems of material and corrosion, **toxicological** aspects, temperature and pressure conditions, and the influence of other gases (CO, H, H2S, CO2, C2H2, O, hydrocarbons). Production processes are described for separating olefins from cracked gas by use of an ethanolamine-CuNO3 solution, for reconcn. of **pure** C3H6 or C2H4 from H-free waste gas by an AgBF4 solution containing HBF4, and for recovering C2H4 from H-containing waste gas by a AgBF4 solution containing H2O2 and HBF4. **Combinations** of the new processes with known separation processes are considered and possible applications are discussed.

IT **14104-20-2**, Silver tetrafluoroborate, Ag[BF4]
(olefin absorption by)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT **3251-29-4**, Copper nitrate, CuNO3
(olefin absorption by ethanolamine and)
RN 3251-29-4 HCAPLUS
CN Nitric acid, copper(1+) salt (9CI) (CA INDEX NAME)



● Cu(I)

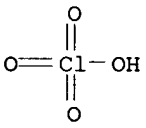
CC 27 (Petroleum and Petroleum Derivatives)
IT **14104-20-2**, Silver tetrafluoroborate, Ag[BF4]
(olefin absorption by)
IT **3251-29-4**, Copper nitrate, CuNO3
(olefin absorption by ethanolamine and)

L88 ANSWER 43 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1961:26746 HCAPLUS
DOCUMENT NUMBER: 55:26746
ORIGINAL REFERENCE NO.: 55:5212h-i,5213a

TITLE: The reaction of copper with suspensions of nitrosyl perchlorate
AUTHOR(S): Hathaway, B. J.; Underhill, A. E.
CORPORATE SOURCE: Univ. Hull, UK
SOURCE: Journal of the Chemical Society, Abstracts (1960) 3705-11
CODEN: JCSAAZ; ISSN: 0590-9791
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

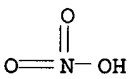
AB Nitrosyl perchlorate reacts with Cu, when suspended in certain organic solvents, such as EtOAc or MeCN, according to the equation: Cu + 2NO+ClO4- = Cu(ClO4)2 + 2NO. If the reaction is carried out at atmospheric pressure, the product is **contaminated** with Cu(NO3)2, but under reduced pressure, a solution of the **pure** perchlorate is obtained. In the presence of moisture, the solns. became turbid and precipitated gelatinous basic Cu perchlorate. The Cu(ClO4)2 is monomeric in boiling EtOAc, but some dissociation occurs in boiling MeCN. Elec. conductivity, visible and UV spectra have been measured with the perchlorate solns., and the IR absorption spectra of solid complexes, such as Cu(ClO4)2.4MeCN are discussed. Attempts to prepare **pure** anhydrous Cu(ClO4)2 were unsuccessful.

IT **13770-18-8**, Copper perchlorate
(and basic perchlorates, from Cu reaction with NOClO4)
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

IT **3251-23-8**, Copper nitrate, Cu(NO3)2
(formation from Cu and NOClO4)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

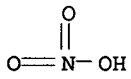


●1/2 Cu(II)

CC 6 (Inorganic Chemistry)
IT **13770-18-8**, Copper perchlorate
(and basic perchlorates, from Cu reaction with NOClO4)
IT **3251-23-8**, Copper nitrate, Cu(NO3)2
(formation from Cu and NOClO4)

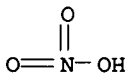
L88 ANSWER 44 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1958:43620 HCAPLUS
DOCUMENT NUMBER: 52:43620
ORIGINAL REFERENCE NO.: 52:7819i,7820a-b
TITLE: The complex structure and the solvent effect on the extractive separation of inorganic

compounds. I. Extraction of bivalent metal nitrates and perchlorates
AUTHOR(S): Libus, Wlodzimierz; Siekierska, Maria; Libus, Zofia
CORPORATE SOURCE: Polska Akad. Nauk, Warsaw
SOURCE: Roczniki Chemii (1957), 31, 1293-1302
CODEN: ROCHAC; ISSN: 0035-7677
DOCUMENT TYPE: Journal
LANGUAGE: English
AB It is supposed that the partition coeffs. α of individual complex compds. depend almost exclusively on the kind and number of the coordinate ligands and the formal charge of the complex ions, but to a lesser degree on the nature of the central ion. Knowledge of the structure and **composition** of the complexes in both phases (water-organic solvent) suffices for a suitable choice of solvent. Extraction curves of Co, Ni, and Cu nitrates by butyl, amyl, isoamyl, hexyl, and octyl alcs. were determined The solute in the organic solvent was mainly composed of ionized salts with hydrated cation. The extraction curves change slightly for different cations, but considerably for different solvents. The values of α of bivalent Co, Ni, Cu, Mn, Zn, Mg, Ca, and Sr perchlorates in water and BuOH are, resp.: 7.2, 7.7, 6.9, 7.6, 8.3, 9.4, 9.5, and 12.9 ± 0.5. They are almost equal for equal initial concns. of the salts in water.
IT **13138-45-9**, Nickel nitrate, Ni(NO3)2
(extraction by alcs.)
RN 13138-45-9 HCAPLUS
CN Nitric acid, nickel(2+) salt (8CI, 9CI) (CA INDEX NAME)



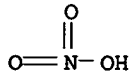
●1/2 Ni(II)

IT **3251-23-8**, Copper nitrate, Cu(NO3)2 **10141-05-6**, Cobalt nitrate, Co(NO3)2
(extraction of, by alcs.)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



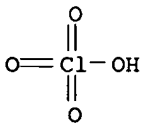
●1/2 Cu(II)

RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Co(II)

IT **13770-18-8**, Copper perchlorate, Cu(ClO4)2
(partition between BuOH and H2O)
RN 13770-18-8 HCAPLUS
CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)

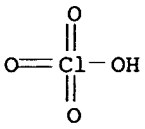


●1/2 Cu(II)

CC 2 (General and Physical Chemistry)
IT **13138-45-9**, Nickel nitrate, Ni(NO3)2
(extraction by alcs.)
IT **3251-23-8**, Copper nitrate, Cu(NO3)2 **10141-05-6**, Cobalt nitrate, Co(NO3)2
(extraction of, by alcs.)
IT 10034-81-8, Magnesium perchlorate, Mg(ClO4)2 13450-97-0, Strontium perchlorate 13455-31-7, Cobalt perchlorate, Co(ClO4)2 13477-36-6, Calcium perchlorate 13637-61-1, Zinc perchlorate 13637-71-3, Nickel perchlorate, Ni(ClO4)2 13770-16-6, Manganese perchlorate, Mn(ClO4)2 **13770-18-8**, Copper perchlorate, Cu(ClO4)2
(partition between BuOH and H2O)

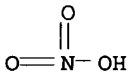
L88 ANSWER 45 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1957:75513 HCAPLUS
DOCUMENT NUMBER: 51:75513
ORIGINAL REFERENCE NO.: 51:13568g-h
TITLE: Solvation of copper and cobalt ions in alcohol-water **mixtures.** II. Absorption spectra of copper and cobalt nitrates in water and absolute aliphatic alcohols
AUTHOR(S): Minc, Stefan; Libus, Wlodzimierz
SOURCE: Roczniki Chem. (1956), 30, 537
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. C.A. 51, 2391c. Extinction curves of Cu++ and Co+++ nitrates in H2O and absolute aliphatic alcs. were determined It was established that the changes in spectra are caused by the changes of the **composition** of the solvation cation layers. The following conclusions are drawn: the tested solns. have optical stability within the range of low concns.; copper perchlorate has a spectrum identical with Cu++ nitrate in water or EtOH.; addition of large vols. of nonpolar solvents (e.g., benzene) to the alc. solution of the salt does not change its absorption spectrum.
IT **13770-18-8**, Copper perchlorate, Cu(ClO4)2
(spectrum of, in H2O and absolute aliphatic alcs.)
RN 13770-18-8 HCAPLUS

CN Perchloric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



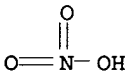
●1/2 Cu(II)

IT **10141-05-6**, Cobalt nitrate, Co(NO3)2
(spectrum of, in aqueous alc. solns.)
RN 10141-05-6 HCAPLUS
CN Nitric acid, cobalt(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Co(II)

IT **3251-23-8**, Copper nitrate, Cu(NO3)2
(spectrum of, in water and absolute aliphatic alcs.)
RN 3251-23-8 HCAPLUS
CN Nitric acid, copper(2+) salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Cu(II)

CC 3 (Electronic Phenomena and Spectra)
IT **13770-18-8**, Copper perchlorate, Cu(ClO4)2
(spectrum of, in H2O and absolute aliphatic alcs.)
IT **10141-05-6**, Cobalt nitrate, Co(NO3)2
(spectrum of, in aqueous alc. solns.)
IT **3251-23-8**, Copper nitrate, Cu(NO3)2
(spectrum of, in water and absolute aliphatic alcs.)

=> => d l87 1-28 ti au

L87 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Silver under-layers for electroless cobalt alloys
IN Lopatin, Sergey D.; Shanmugasundrum, Arulkumar; Shacham-diamand, Yosef

L87 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Organometallic precursor **composition** and method of forming metal film or pattern using the same
IN Hwang, Euk Che; Lee, Sang Yoon; Byun, Young Hun; Ryu, Joon Sung; Son, Hae Jung

L87 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Gas-Phase Ion/Ion Reactions of Multiply Protonated Polypeptides with Metal-Containing Anions
AU Newton, Kelly A.; Amunugama, Ravi; McLuckey, Scott A.

L87 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Relationship between the Ratio of Ligand to Metal and the Coordinating Ability of Anions. Synthesis and Structural Properties of AgX-Bearing Bis(4-pyridyl)dimethylsilane (X- = NO2-, NO3-, CF3SO3-, and PF6-)
AU Lee, Jung Woon; Kim, Eun Ae; Kim, Yun Ju; Lee, Young-A.; Pak, Youngshang; Jung, Ok-Sang

L87 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Unusual separation property of propylene/propane mixtures through polymer/silver complex membranes containing mixed salts
AU Kim, Jong Hak; Park, Su Mi; Won, Jongok; Kang, Yong Soo

L87 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Corrosion resistant coatings with good adhesion to metals
IN Stoffer, James; O'Keefe, Thomas; Morris, Eric; Yu, Pu; Hayes, Scott A.

L87 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Deposition products and medical **composite** materials
IN Djokic, Stojan

L87 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Process for the separation of olefins from paraffins using permselective membranes
IN Herrera, Patricio S.; Feng, Xianshe; Payzant, John Donald; Kim, Jeong-hoon

L87 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Method for preparing lanthanide-containing epoxy polymer for optics and quantum electronics
IN Amirova, L. M.; Fomin, V. P.; Amirov, R. R.; Andrianov, S. N.

L87 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Silver or copper compound-activated adsorbents for separation of unsaturated hydrocarbons from gas mixtures
IN Choudary, Nettem Venkateswarlu; Kumar, Prakash; Puranik, Vijayalakshmi Ravi; Bhat, Sodankur Garadi Thirumaleshwara

L87 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Analysis of the glass transition behavior of polymer-salt complexes: An extended configurational entropy model
AU Kim, Jong Hak; Min, Byoung Ryul; Won, Jongok; Kang, Yong Soo

L87 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Electroless metallization of non-conductive plastic surfaces using tin sensitizer and silver catalyst
IN Joshi, Nayan H.

L87 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Polymer **composites** containing nanometer metal granules and manufacturing methods therefor
IN Won, Jeon Ok; Kang, Yon Soo; Chung, Bom Sok; Yoon, Yo Sang

L87 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Method for producing trimer of indole derivative by oxidative cyclotrimerization of indole derivative, and trimer of indole derivative and laminated structure thereof
IN Maeda, Shinichi; Momose, Fumino; Saitoh, Yoshikazu; Saitoh, Takashi

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TI Light-transforming polymeric **composition**
IN Anisimov, V. M.; Anisimova, O. M.; Zaychenko, N. L.; Mardaleyshvili, I. R.; Marevtsev, V. S.; Ostrovskii, M. A.; Shienok, A. I.

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TI Adsorbents, method for the preparation and method for the separation of unsaturated hydrocarbons for gas mixtures
IN Cho, Soon Haeng; Han, Sang Sup; Kim, Jong Nam; Choudary, Nettem Venkateswarlu; Kumar, Prakash; Bhat, Sodankoor Garadi Thirumaleshwara

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TI Atom transfer polymerization for manufacture of long-chain alkyl poly(meth)acrylates as lubricating oil additives
IN Roos, Sebastian; Eisenberg, Boris; Bollinger, Joseph Martin; Scherer, Markus

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TI Atom transfer radical polymerization for manufacture of polyacrylates and polymethacrylates as lubricating oil additives
IN Roos, Sebastian; Eisenberg, Boris; Mueller, Michael

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TI Representation of nonideality in concentrated electrolyte solutions using the Electrolyte NRTL model with concentration-dependent parameters
AU Abovsky, V.; Liu, Y.; Watanasiri, S.

L87 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Electrolytic materials for modulating light and an electrochromic device containing them
IN Caillot, Eric Gilles Charles; Herlem, Michel Paul; Szekely, Marianne Claire Martin

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TI Estimation of the Pitzer equation parameters for aqueous complexes. A case study for uranium at 298.15 K and 1 atm
AU Plyasunov, Andrey; Fanghanel, Thomas; Grenthe, Ingmar

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TI Method of manufacturing passive elements using conductive polypyrrole formulations
IN Murphy, Oliver J.; Hodko, Dalibor; Andrews, Craig C.; Clarke, Eric T.; Chepin, Suchitra

L87 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Stable solutions of curing accelerators for epoxy resins
IN Wegmann, Alex; Wolleb, Heinz

L87 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Formation of inorganic conductive coatings on substrates
IN Moran, William P.

L87 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Stabilized salt-containing sols or gels for mixing with polymer latexes in the manufacture of coatings
IN Kissel, Charles L.

L87 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Photoactivation type physical developer. II. Comparison of palladium nuclei and silver nuclei in photoactivation type physical development
AU Tanaka, Katsuhiko; Kokado, Hiroshi

L87 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Study of the reaction of cobalt(II) with some sulfoxides
AU Fernandez, N. F.; Ukraintsev, V. B.

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TI Triazines and crosslinked polymers or copolymers
IN Emerson, William E.; Dorfman, Edwin

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